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State Normal School

Mayville, N. Dak.

CATALOGUE 1900-1901.

ANNOUNCEMENTS 1901-1902.

TENTH YEAR.

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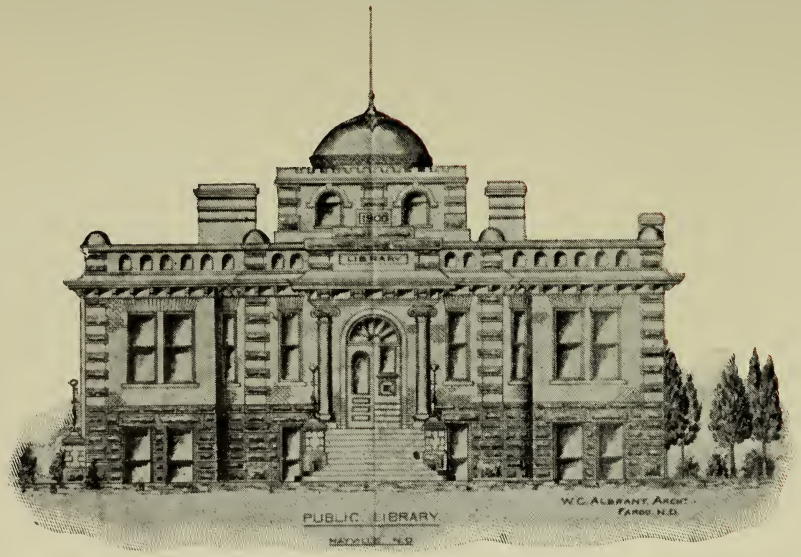

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TENTH ANNUAL CATALOGUE

OF THE

STATE NORMAL SCHOOL

AT

MAYVILLE, NORTH DAKOTA,

FOR THE SCHOLASTIC YEAR ENDING
JUNE 30, 1901.

ANNOUNCEMENTS FOR THE SCHOLASTIC YEAR
ENDING JUNE 30, 1902.

FARMER, MAYVILLE, N. D.

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CALENDAR.

1901.

FIRST TERM.

Entrance Examinations and Registration . . . . . Tuesday, September 24
Regular Work Begins . . . . Wednesday, September 25
Holiday Vacation Begins . . . . Saturday, December 21

1902.

SECOND TERM.

Entrance, Examinations and Registration . . . . . Tuesday, January 7
Regular Work Begins . . . . . Wednesday, January 8
Vacation Begins . . . . . Thursday, March 27

THIRD TERM.

Entrance Examinations and Registration . . . . . Tuesday, April 1
Regular Work Begins . . . . . Wednesday, April 2
Commencement Day . . . . . Friday, June 13

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MABLE HIBBARD, ... Critic Intermediate Grade

EMMA F. LUCKEN, ... Critic Grammar Grade

MRS. E. C. DEITZ, Matron.

W. J. YOUNG, Janitor.

LOCATION OF THE SCHOOL.

Mayville is situated upon the Breckenridge and Larimore division of the Great Northern Railway, about forty miles from Casselton and thirty miles from Larimore, which are on the Northern Pacific and Great Northern Railways respectively. Mayville is one of the most beautiful and thriving of the small towns of the Red River Valley. It has over twelve hundred inhabitants, and offers the modern conveniences and comforts of living. The city is lighted by electricity and has an adequate system of water works. The moral and intellectual tone of the place are attested by the presence of five churches and a free public library representing an investment of twelve thousand dollars. The number of well-to-do families who have made themselves homes here in order that their children may enjoy its educational advantages help to make Mayville an ideal location for a Normal school.

Organization.

The State Normal School at Mayville was established by the Constitutional Convention of this state and made a part of its public school system, and was endowed by it with 30,000 acres of land. It was organized in accordance with legislative enactment, under the provision of Article XIX of the State Constitution, and opened its doors for the admission of pupils on the first day of December, 1890.

The Building.

It is a new, handsome and thoroughly constructed building. The walls are of red, sand-moulded brick, and white Kasota sandstone. The inside finish is ash, oak, birch and maple. It is heated throughout with steam, radiators being set in all rooms; it is thoroughly ventilated by a copious supply of fresh, warm air and is lighted by electricity. Bath rooms are provided for men and for women, and are supplied with an unlimited amount of hot and cold rain water.

Professional Value of Diploma

FIRST GRADE CERTIFICATE.

The Diploma of the Normal School is a certificate of the first Grade authorizing the holder, provided he is of legal age, to teach without further examination in any of the public schools of the state for a period of two years.

LIFE CERTIFICATE.

When the graduate has had three years successful experience in teaching and governing a school, the law authorizes the Superintendent of Public Instruction to endorse his diploma, making it a professional certificate of the first grade, valid for life.

Relation to the University of North Dakota.

By an arrangement with the authorities of the University of North Dakota the graduate of this school is credited with one year's work at the university. He enters the university with the rank of sophomore and graduates with the degree of B. A., when he has accomplished three years work.

Relation to the North Dakota Agricultural College.

The North Dakota Agricultural College gives to the graduates of this school the same recognition as does the University of North Dakota—graduates him on the accomplishment of three years work.

Expenses.

Tuition is free in all departments.

Registration Fee.

By order of the State Board of Normal School Trustees a uniform registration fee is charged at the Normal Schools at Mayville and at Valley City as follows: Five dollars for the entire year, to be paid by one entering the first term; four dollars for the last two terms, to be paid by one entering the second term; and three dollars for the last term, to those entering the last term.

Text Books.

All necessary text books are furnished by the school for which a library fee of $1.25 per term is charged.

Boarding.

Rooms and meals in the building cost $12 per month of four weeks, payable in advance.

Meals are furnished in the Boarding Hall to both ladies and gentlemen rooming outside the building, at $10 per month of four weeks, payable in advance.

Board and room in the town costs $3.00 per week. Rooms can be rented at from $1 to $6 per month, according to accommodations furnished.

By clubbing, students have succeeded in reducing their living expenses to $8 per month each. The work of the school is such as to demand the full available time and effort of the students, and self-boarding is advisable only when special circumstances demand it.

Dormitories.

The Dormitories are upon the upper floor. The rooms are 27 feet in length and are ample for four occupants; are heated by steam and well ventilated with fresh warm air. They are furnished as double rooms, each

room being carpeted and supplied with two large bedsteads with springs and matresses, two washstands, with set of bedroom ware, two bureaus, two tables, and is lighted by electricity. The Preceptress rooms upon the same floor and has full charge of the Dormitory. Ladies are admitted in order of applications. Each one should bring with her one pillow, two pairs pillow slips, to pairs sheets, a woolen blanket, a comfortable, a spread, napkins and towels. Occupants of the Dormitory will be expected to take entire care of their rooms.

Water-closets and a bath-room furnished with hot and cold water are upon the Dormitory floor.

Normal School Library.

The generous gift of one thousand dollars recently made to the library by Mr. J. L. Grandin has added many standard books to that important department of the school. Different members of the faculty made lists of books that were most needed in their respective lines of work which, added to those already on hand, furnish the means of doing a high grade of work on the library plan. The library is catalogued on the Dewey decimal plan and, with the assistance of a competent librarian, students find they are enabled to to come easily by that which others have labored hard for. In addition to its large list of well selected books the library is well supplied with the best current periodical literature.

Mayville Public Library.

Through the generosity of Messrs J. L. and E. B. Grandin, supplemented by the enterprise of its public spirited citizens, Mayville has established a free public library, representing an investment of twelve thousand dollars. This sum carefully invested by those possessing peculiar fitness for the task has secured to Mayville a

library of very great educational value. In addition to a large list of well selected books and all the leading papers and magazines, the library contains amusement rooms and a well equipped gymasium.

It is located a short distance from the Normal school and students are admitted to all its privileges free of charge.

Literary Society.

A literary society open to all students is in successful operation. Its meetings are held Saturday evenings, fortnightly, and are conducted according to parliamentary usages. They are designed to acquaint its members with the customs and practices of deliberative bodies, to give an impetus to literary investigation and to develop talent for literary work, public speaking and extemporaneous discussion. Open meetings are held occasionally to which the public is invited.

Religious Privileges.

The Congregational, the Episcopal, the Hague, the Synod Lutheran and the Methodist Episcopal churches are represented in Mayville and students are welcomed to them all. Students are advised to identify themselves with the church of their own or their parents' choice and avail themselves to the fullest extent of the privileges of a church home.

Admission.

Entrance requirements:

1. The applicant must be fifteen years of age.
2. He must possess a good moral character.
3. It is advisable to come recommended by some responsible person, as the county superintendent.
4. If the applicant holds a County Certificate he will be admitted without examination.

5. If the applicant holds no County Certificate he will be required to to pass a fair examination in Arithmetic, Grammar, Geography and U. S. History.

6. A graduate from a first class High School will be admitted to the Professional Course without examination.

Courses of Study.

The School offers three courses of study:

1. An English course.
2. A Latin course.
3. A Professional course.

Courses one and two can be completed by strong students, having little or no High School training, in four years; course three can be completed by strong graduates of first class High Schools in one year.

Full credit is given for all High School work accomplished in the schools of our own state and in schools of similar grade elsewhere.

The detailed statement of the course of study and the discussion of the theory of the School, both of which occur elsewhere in this catalogue, will help to interpret this statement.

General Remarks.

Be present the first day of the term.

Inform the President when you expect to arrive, and also when you expect to leave, if it is necessary to leave before the close of the term.

Students must not change or select boarding places without consulting the President.

Students are free to make and receive calls Saturday evenings, but other evenings, aside from Sunday, are expected to be devoted to study.

Students, on arriving, should report at once to the President at his office in the Normal School building, which is in sight of the station.

The Normal School desires herewith to thank the Press of the state which has held itself so ready to respond to the needs of the common schools as represented in this institution. Further kindness extended will be appreciated.

We will be glad to send this catalogue to those whom school authorities may desire to receive it, and to cooperate generally with superintendents and principals in all measures to uplift the teaching work in the public schools of the state.

It is important to them that students enter promptly on the first day of the term. The work is arranged to be of special benefit to those who can spend the entire year.

For further information address,

JOSEPH CARHART,
President State Normal School, Mayville, N. D.

COURSES OF STUDY.

ENGLISH COURSE.

	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
FIRST TERM	Reading U. S. History Arithmetic Geography Penmanship	Music Composition and Rhetoric Algebra Zoology U. S. History	General History Psychology Geometry Literature Drawing	Practice Civics History and Philosophy of Education Method in Geography and History Physics
SEDOND TERM	Civics English Grammar Arithmetic Geography Penmanship	General History Composition and Rhetoric Algebra Physiology Music	Literature Psychology Geometry Method Drawing	Practice History and Philosophy of Education Physics Civics Physography
THIRD TERM	English Grammar Geography Music U. S. History Botany	General History Composition and Rhetoric Algebra Physiology Drawing	Literature Psychology Method in English and Arithmetic Drawing Geometry	Psychology Physics History and Philosophy of Education School Law Practice

	*LATIN COURSE			Professional Course.
	SECOND YEAR	THIRD YEAR	FOURTH YEAR	ONE YEAR
FIRST TERM	Composition and Rhetoric Algebra Zoology Latin Music	Latin Psychology Geometry Literature Drawing	Civics History and Philo ophy of Education Method in Geography and History Latin Physics	Practice Psychology History and Philosophy of Education Method in Geography and History Review
SECOND TERM	General History Latin Algebra Physiology Composition and Rhetoric	Drawing Psychology Geometry Latin Literature	Physiography Practice History and Philosophy of Education Latin Physics	Practice History and Philosophy of Education Review Method Psychology
THIRD TERM	Drawing General History Algebra Physiology Latin	Astronomy Latin Method in English and Arithmetic Drawing Psychology	Physiography Latin History and Philosophy of Education Practice School Law	Practice Psychology History and Philosophy of Education Method in English and Arithmetic Review School Law

*The first year of the Latin Course is identical with the first year of the English Course.

OBSERVATION AND PRACTICE IN THE CITY SCHOOLS.

Through the courtesy of the Board of Education of the City of Mayville, our students are premitted to observe and practice in certain designated school-rooms of the city, thus giving them an opportunity to acquire experience under conditions exactly similar to those they will meet with when they are employed as teachers in the public schools. Teachers are selected for such rooms who are especially qualified to exemplify the correct principles of the science and art of education and who are, at the same time, capable of sympathetic but searching criticism on the efforts of the pupil-teachers.

THEORY OF THE SCHOOL.

PURPOSE.

The aim of this school is to prepare young people for the teaching service of the state of North Dakota. To the extent that the purpose of an organization determines its character all the work of the school is professional. It does not give general culture for its own sake; it does not aim to prepare young men and young women for college, nor for the general pursuits of life. It gives general culture; its graduates are admitted to advanced standing without examination to the State University and to other colleges; its professional work upon the common school branches and other subjects includes a preparation for business, and the moral education which qualifies young men and women to be safe guides for the state's children is a good

preparation "for complete living" and is beneficial in all the walks of life, but these results, though actual, are incidental and are accomplished because the part is necessarily included in the whole.

While the applicant for admission to the school is not required to pledge himself to teach in the public schools of the state, and while it freely admits to all privileges young men and women of good character and earnest purpose, provided they are willing to submit themselves to the thorough training in scholarship and conform to the high ideals of conduct demanded in a school for the training of teachers, the management keeps constantly in mind the statute which declares that "the object of such Normal Schools shall be to prepare teachers in the science of education and the art of teaching in public schools." The school qualifies its students for various phases of public school work, from the primary grades to most departments of the High School, but its curriculum and training are especially adapted to give superior qualifications for the work of the first eight grades of the public school system.

The vital importance of this phase of public school education is apparent. The words of Edward Everett, uttered as governor of Massachusetts at the opening of the first Normal school established in this country for the purpose of improving the public schools, have greater weight today than at any previous time, and apply with peculiar force to North Dakota. "No rational man, it seems to me, can fail to see the superior importance of the common schools. They give the keys of knowledge to the mass of the people If there be any persons to whom the words 'common school' and 'common school education' convey an idea of disparagement and insignificance, such persons are ignorant, not merely of our true political system, but of the nature of man. Our common schools are important

in the same way as the common air, the common sunshine, the common rain—invaluable for their commonness. They are the corner stone of that municipal organization which is the characteristic of our social system. They are the foundation of that widespread intelligence which like a moral life, pervades the country; they are the nursery of that inquiring spirit to which we are indebted for our preservation of the blessings of an inquiring spiritual faith."

The great material resources of this state have caused an influx of people from other states and other nations. They come from many climes, representing many theories of government, different religious convictions, and speaking a multitude of tongues. This heterogenous multitude is to be formed into a homogeneous people. The most efficient means of accomplishing this result is the common school. Resources are not wanting. The public school fund is ample; school houses already numerous, are rapidly multiplying, and the call for trained teachers is most urgent. It is the special function of the Normal school to supply this demand.

As teachers in country schools and graded schools of the city; as principals of high schools and superintendents of city schools, and as county superintendents, graduates and under-graduates of this school are rendering to society efficient and honorable service and are receiving a money compensation varying according to ability and experience but averaging well with that received in other professions. In qualifying young people to secure the boys and girls of the state in their common school rights the Normal school employs the following

Means.

1. The school gives to its students a thorough, scientific knowledge of the branches they are to teach, such

as reading, grammar, arithmetic, geography, history, etc. Students come to the school knowing many of the facts of these subjects but, having studied them in the grades below the high school, they have not organized the facts into a scientific form nor learned their educational value in developing the minds and enlarging the information of the pupils of the public schools. A knowledge of arithmetic and grammar that enables one to preform accurately and quickly the problems of the counting room and to construct sentences correctly does not qualify him to use to the best advantage the science of number and the logic of the English sentence as educational instruments. A teacher must be able not only to practice correctly the art, he must have a conscious mastery of the science of each of the common school subjects of instruction. He must know each fact, and know it in relation to every other fact of the subject, and know the relation of all the facts to the general truth which distinguishes a given subject from all other subjects. True knowledge is thought in the mind corresponding to the thought in the subject studied. If the thought in the subject studied exists in an organic form, true knowledge discerns the inherent relations existing between the parts of the subject and sees the relation of each part to the general truth which explains the part and determines its place in the subject. The particular and the general act and react upon each other. The general truth must be discerned in the particular fact, and the general truth is the explanation of the fact. In true knowledge each explains all and all explains each.

The Hon. Wm. T. Harris, LL. D., United States Commissioner of Education, speaking from a wide knowledge of facts and a sound theory of education has indicated in the following the true place of the common school subjects in the Normal school curriculum:

"The substantial Normal school course deals chiefly with the common school branches, reading, writing, arithmetic, geography, history and grammar. It is often said by way of apology that could we secure pupils of advanced grades this would be unnecessary. We are obliged to do this elementary work in our Normal schools because of the fact that pupils come to us ill-prepared as regards these studies. But no matter what grade of pupils the Normal School ever receives, its professional work is chiefly done on the common branches, the reason being this: no matter where the pupil learns his common branches he learns them as steps in a graded course, and when he has climed to the higher steps he drops these studies and returns to them no more, except when he teaches them to others. Of course it follows that in the high school or college these lower branches are not reviewed. * * * But the teacher needs precisely this re-examination of all elementary branches. * * The Normal school therefore took up just this work at the beginning and performed it well. It induced in the young men and women preparing for the work of teaching the habit of taking up the lower branches in their relations to the higher—taking them up constructively, as it were. For to study arithmetic in the light of algebra and geometry is to study it constructively. Its rules are derived from algebraic formulae and are to be demonstrated by algebraic processes. So the details of geography have their explanation in formative processes of land and water as treated in physical geography, and the sciences of which it is a compend. The first learning of a subject is largely the work of memory. The real knowing begins with reflection upon the data and the discovery of inter-relations. The class work and relations of the Normal school astonish the student at first. He supposes himself to understand the subject, but he discovers there are a thousand phases which he had

not thought of. He learns the second lesson with some of these possible side-questions in view. He improves from day to day, and in the course of a year he has acquired a different ideal of the best method of study. He has passed from the text book method to the method of investigation. Formerly he would have held the pupil responsible to learn the words of the book and would not have probed the understanding. Now he goes directly behind the words of the book into the pupil's understanding and teaches him how to think—how to investigate. He is to study the book, but to critically compare one statement with another—penetrate to the construction of the book itself. He is to go out of the book into all his own experience, to verify or refute its statements. He is to go to other stores of information on the subject in this work of verification and critical comparison. When this is done the student finds to his great surprise that the elementary branches stand for the five great branches of human learning in its entirety, and that a proper study of them opens for him all the windows of the soul."

Nothing can take the place of these elementary branches, but they are supplemented in the general curriculum of the Normal school by courses in the philosophy of history, higher mathematics, higher English, Latin, music and drawing, experimental science by the laboratory method, etc. These subjects are valuable, but their chief value, from the Normal school point of view, is the increased mastery they give over "the elementary branches [which] stand for the five great branches of human learning in its entirety."

2. But mind is the subject of education. To develop and train the mind is the real purpose of teaching. To train a faculty or power of the mind it must be exercised upon its proper subjects and in accordance with the law of its nature. A knowledge of mind—child mind

and mature mind—is to the teacher what a knowledge of the body is to the physician. Through the teaching of psychology as a science and by discovering in every subject the nature, processes, laws and products of the human mind the Normal school seeks to give to its pupils a working knowledge of the facts and principles of mental science which the teacher needs in developing the minds of others.

3. The school reveals to its students the way in which the mind thinks a subject. It leads them to see that a rational method of instruction depends upon the nature of the subject studied and the laws of the thinking mind at the various stages of development. It teaches them the principles of method in general and helps them to discover those principles in particular subjects of instruction such as reading, grammar, arithmetic, geography, history, etc., The method of the primary, intermediate and more advanced phases of public school work is make the subject of thorough investigation.

4. The school aims to give to the future teacher of the state's children a correct theory of life, and helps them to determine, in the light of human destiny, the true purpose of education and to see the place of the school among the institutions of society and to appreciate its special functions. Literature, general history, the science of education, and the history of educational theories furnish the data for reaching a sound conclusion. The best minds of all time have wrought upon the problem of school education. Systems of education have varied from time to time according to the theories of life which have prevailed at different epochs. A study of those theories, recorded in the history of education gives to the future teacher breadth of view, judicial candor and steadiness of purpose. An effort is made to have all the work and discip-

line of the school conform to a true ideal of life and to show by example how a school may be made the means of developing character by a constant appeal to the highest motives to which the student is capable of responding and by securing prompt and willing obedience to reasonable requirements.

Correlation of Professional Work.

The school is an organic, self-consistent whole. Each part by being in accord with the purpose of the school as a whole, is in harmony with every other part, and the student, as he advances, finds all previous work helpful to him in taking the next step. This relation exists between the study of subjects, such as geography, arithmetic, history, etc., on the one hand, and of psychology, science of education, method and practice on the other. The study of elementary subjects is so conducted as to be a preparation for psychology; the general principles of method are derived from the logical method inhering in the nature of the elementary subjects and from psychology; the practice work is based upon the previous work—the study of subjects, of psychology, of the science of education and of special methods which consist in an application of the principles learned in the science of education to the consideration of the teaching of particular subjects, such as arithmetic, reading, language, geography, etc. The same principle which correlates parts of the school regarded as a whole, and gives to it the character of self-consistency, applies with equal force to the facts of each subject. It is not an accident that some facts belong to arithmetic, some to geography, and still others to grammar. Some facts are arithmetical, others historical, etc., in the nature of the case; that is to say, there is some general truth common to all the facts of a given subject which explains the meaning of those facts, unites them into a group by

means of a common truth and, at the same time, separates them from the facts of all other subjects in which that truth does not inhere. To see the general truth in a given subject, to see all the particular facts as related to it, and to see the forms in which they address themself to sense-perception, to memory, to imagination, to the understanding and to the reason—this scientific and psychological study of the subjects which the graduate of the Normal school is to use as instruments in educating the children in the public schools, is a very important element in his professional training. But that it may be in the highest sense effective this study of the elementary subjects must be seen in its relation to other parts of professional training. Having discovered in reading, arithmetic, geography, grammar, history, etc., products of sense-perception, memory, imagination, the understanding and the reason, the student is furnished with a basis for comprehending the laws and conditions of perception, memory, imagination, the understanding and the reason as dealt with in psychology, and having discovered the nature of the branches of study as given above, and having discovered in psychology the law of the learning mind, the student of pedagogy is prepared for the study of the science of education, which considers the adaptation of phases of subject-matter to corresponding stages of mental growth—from perception to reason—and the arts and devices which may be employed to stimulate the mind of the learner to appropriate the phase of a subject which he is capable of grasping at a given stage of development. Having learned these general truths, the student is prepared to apply them in detail to the various subjects, such as arithmetic, language, geography, history, etc., and this constitutes special method. Special method shows definitely the order in which the phases of a given subject unfold to the intelligence of a learner from the primary grade up,

and also the means to be employed to stimulate him to take the successive steps involved in a mastery of the subject. This phase completes his preparation for giving instruction, and the student is now ready to enter the practice school and acquire skill in the art of teaching. Here he will find it necessary to re-adjnst his previously learned theories—he must adapt himself to conditions as they exist; but the more thorough his preparation, the more clearly he conceives the end from the beginning—the more definitely he has thought out the steps by which his class is to go from the position in which he finds them to the goal proposed—the more energy he will have to meet the unexpected and the more readily can he adapt himself thereto.

Outlines of typical subjects, illustrating the foregoing principles, are given on the pages that follow.

DEPARTMENT OF HISTORY AND GEOGRAPHY.

WILLIS E. JOHNSON.

GEOGRAPHY.

(Three Terms.)

Geography deals with those truths which pertain to the earth in relation to man's institutional life, placing immediate emphasis upon business life.

In the language of Guyot, "Geography deals with the earth as the home of man." While the subject-matter of geography deals with nature and human nature, it is always faced one way, toward man. The study of geography as a natural science exclusively, is like the play of Hamlet with Hamlet left out. Seasons, winds, rainfall, surface-relief, soil products, and industries are not geographical topics, unless they are studied in their interrelations as they make a home for man, and form a basis for his union in business, the division of labor, and the building and maintaining of society.

Geography as a subject consists in relations; it is the thinking of society in its formative process as based upon nature and nature's laws.

To have a clear concept of these relations implies a constructive knowledge of society and of the essential natural phenomena of the earth. The acquisition of the

former is begun in the course in History and that of the latter occupies the major portion of the time of the classes in Geography during the first two terms.

While "one and inseparable," geography may be thought into the logical divisions, mathematical, physical, and political. This division is made on the basis of the aspect in which the earth is viewed.

In mathematical geography the earth is seen as a planet and the culminating truth of this phase is the earth as divided into astronomical belts of heat.

It usually requires about six weeks to acquire a teacher's view of the earth as a planet, for the knowledge of mathematical geography acquired in the common school seldom includes more than a few formal abstractions based excusively upon diagrammatic illustrations and lacks vivid experiential and rational insight. This concept of the earth in its most general geographical relations conditions and leads to a view of the earth in its more special relations.

In physical geography the earth is viewed as an organism; and the geographical elements,—land, water, air, physical products; and the geographical processes,—wind, currents and other movements among the elements,—are studied as they are interrelated and form the material basis for the life of man. Physiography, the science of land structure and sculpture and the evolution of surface relief and soils, comprises much of the work of physical geography.

In political geography the earth is viewed as the theatre of man's actions and its central truth may be said to be man's use of the earth and its elements. During the first two terms work in geography the student has viewed in their organic relations the essential elements of the natural phenomena which condition industrial life and

through that all institutional life. In his study of United States History he has organized some of the fundamental facts of social elements as they have entered into our national life. He is now in a position rationally to construct political geography.

History.

History deals with the phenomena of social interaction and evolution. It traces the successive stages in the development of the institutions of society, the "expansion of spirit" and of its endeavor to bring institutions into harmony with its own nature. Stating this negatively, man is conscious of wrong limits and endeavors to make those which are negative, positive. This progress in removing limits, which history records, is determined by the nature of mind and the nature of its negative, environment. Mind in itself is free but in objectifying itself in language, art, and institutional forms, finds limits to an adequate expression of its inherent nature. These limits are three-fold:

1 Physical limits, or those limits which arise because of the dual nature of man by which he is related to nature.

2. Institutional limits, or those arising from man's relation to his fellows. These include all the social relations of man and may be classified as (a) domestic, (b) industrial, (c) educational, (d) polite society, (e) religious, and (f) civic. In each of these six institutions we recognize clearly distinguishable subordinate institutions embodying some individual expression of the general idea of the institution as a whole.

3. Personal limits, or those arising from man's relations to his ideal self.

The establishment of right limitations, or freedom, occurs through the medium of society. The institutions

of society, by their interactions and growth, are the media for the realization of the spirit of man which history records. Thus a study of history is a study of the "universal man" as he expresses himself in institutions. While these institutions of society are mutually the interdependent and some peoples and times best illustrate development in one institution to the exclusion or slurring of others, the evolution of the state is the dominating line of development. "The state gives direction not only to political history, but to some extent, to all history." Thus especial emphasis is given to the development of civic institutions. "History is philosophy teaching by example." The events, places and outward phenomena of history are only "eyes" through which history itself is studied.

United States History.

The first term's work covers the period ending with the adoption of the constitution and consists of a study of the following:

1. The institutions of society as they were in Europe immediately antecedent to and during their transplantation to this continent.

2. Those events in contemporaneous European history which modified conditions in our institutional life.

3. The elements of civic life as they developed in English colonies with the local modifications due to the influences of varying geographical and industrial conditions.

The second term's work is almost exclusively a study of our national development under the constitution. A brief sketch is made of the Industrial Revolution, our economic history, the development of slavery and of our international relations as they have affected our civic growth.

Civics.

History deals with institutions in the process of becoming. Civics deals with civic institutions as they are, the product of the developement of complex human nature. The first term in civics, immediately following the course in United States history, consists in an examination of the inter-relations among the elements of civil government which have been traced in their development from simpler forms.

Not so much a knowledge of the facts of civil government as of the relations of its truths to the spirit of citizenship and rational patriotism is considered the educational value of the subject. In this subject, however, as in all others, to be free one must know the truth, and a good working knowledge of the machinery of our government and political system is acquired.

The work in advanced civics follows the work in United States history, elementary civics, and general history and is divided into two parts:

1. Comparative civil government, in which the governmental systems of the principal nations of the world are studied and compared with our system.
2. A course in economics.

Method in Geography.

The work in this subject is based upon the work in Geography and in Psychology. The following outline indicates to some extent the nature and scope of the work:

1. The principle of organization of the subject and what it determines. It is seen as determining what truths belong to the subject and what do not, classifies the subject and indicates its relation to other subjects.
2. The educational value of Geography.
3. The mental processes in geography teaching:

a. Presentative forms. Familiarity with geographical elements and such geographical processes as come within the range of the child's experience.

b. Representative ideas. Natural and social conditons which must be learned from the experience of others and from representations.

(1.) Means employed in acquirement:

(a) Pictures, verbal and those appealing to sight.

(b) Molding and mapping. These media for expression and interpretation of geographical ideas to have their full educational value need special attention. The steps are as follows:

(1) Molding and mapping known regions, in their presence and from memory.

(2) Recognition of known regions through maps and moldings of them.

(3) Interpretation of unknown regions through representations.

c. Thought relations. Conditioning elements of life, of production, and of commerce; dependence and interdependence of social and natural conditions; the formation of geographical concepts.

4. The relation of nature study to geography work.

5. After a consideration of the way the world appears to the child upon entering school, how he is to grow into an adequate conception of it and the successive intervening concepts, a common school course of study is worked out, not for the sake of a course of study so much as to see how the subject unfolds in the mind of the child.

METHOD IN HISTORY.

The intimate relations existing between geography and history make the work in method in geography contribute to an understanding of the method inhering in history-teaching as based upon the nature of the subject

and the nature of mind. The purpose of this study is to get an insight into the mental processes involved in thinking history, the phases of historic material adapted to contribute to the formation of historical concepts and the means to be used in adapting phases of the subject-matter of history to corresponding stages in the development of the mind of the child. The following outline indicates the principal topics discussed:

1. The principle of organization of history in relation to the facts and phases of the subject.
2. The educational value of history.
3. Materials of history.

a. Sense phase of history. Those materials appealing to the senses and the sensuous phases of memory and imagination.

(1) First hand material. Community life, the outward events in the institutions constituting the immediate environment of the child, especially the family and industrial society. No differentiation is made between history and civics in the choice and arrangement of these materials, an election, the opening up of a new road, a political campaign, the regulation of the affairs of the school, etc., all fitting into this study, largely on basis of contiguity.

(2) Materials from distant places and times; e. g., a picture of Washington, the sensuous elements of succeeding phases, all susceptible of sensuous imgery.

b. Representative phases of history. Materials appealing to the higher representative powers and inferential reasoning. The story of history, the real and the ideal.

c. Logical phase of history.

4. The organization of the materials of history.

a. Local, current and graphic.

b. Stories of real persons and of actual events.

c. Myths, legends, folk-lore and other fictitious history.

d. The application of the culture-epoch theory; in the organization of material from European history; in the organization of U. S. history.

e. The use of the categories of thought in history and teaching.

DEPARTMENT OF NATURAL SCIENCE.

DANIEL E. WILLARD.

Physics.

Physics deals with the phenomena of FORCE. There is no matter known to us except through the phenomena of FORCE. All the phenomena of Physics therefore may be resolved into Force-phenomena. Newton showed that there is a constantly acting Force existing among all particles of the known universe. This is known as the principle of gravitation. In the laboratory this Force manifests itself in mass-phenomena, molecular phenomena, and ether-phenomena. There are therefore three departments of Physics representing these three classes of phenomena. The phenomena of falling bodies, adhesion, pressure of fluids upon restraining walls, belong in the department of mass-physics. Surface tension, elasticity and compressibility of gases, cohesion, sound, are examples of molecular-physics. Machines like the lever and pulley, the composition of forces, fall under the subdivision of falling bodies, and hence under mass-physics. The common or "suction" pump is a machine which is explained under the phenomena of mass-physics; the force-pump under the molecular phenomena of compressibility and elasticity of gases. The phenomena of sound are the phenomena of the vibratory motion of molecules in the mass. Heat is a mode of motion, a manifestation of molecular Force.

If, as is supposed, all the molecules of the universe are in rapid vibration and that as this vibration increases in intensity, - - - - correspondingly as sound increases in loudness, - - - - the mass becomes hotter, then heat is a manifestation of Force, a mode of motion, and comes under the law of falling bodies, the law of gravity, for its explanation. In Astro-physics it is shown that a cold nebulous mass may become intensely hot by its own falling together, i, e., by its own gravity, just as upon the earth it is a familiar fact that colliding bodies generate heat. Light is the phenomenon of vibratory motion of ether as the conveying medium, just as sound is in a molecular mass. Sound acts through comparatively slight distances at a slow speed. Light acts through indefinite distances at an enormous speed. We know of the existence of ether only by the phenomena manifested through it. We know of the existence of sound-waves only by the phenomena manifested. Both are manifestations of Force. The light-vibration in the ether is set up by energy imparted to it from some source. If this vibration produces a disturbance upon the retina of the eye light is seen. If the vibration is communicated to the molecules of the earth and a vibration set up in these, heat is produced. In like manner the light-vibration might be transformed into a vibration which could produce a disturbance upon the nerves of the ear and so sound would be heard. Magnetic polarization and electric stress are manifestations of conditions due to vibratory motion in a magnetized or electrified body.

Botany.

The science of Botany is the science of Plant life, as Zoology is the science of Animal life. Plants and Animals are organic things; both live and grow and reproduce their kind by means of vital processes. These pro-

cesses are less complex in the Plant than in the Animal kingdom. Rainwater, earth, and sunshine constitute the materials out of which Plants build their tissues. The lowest forms of plant life bridge the chasm between the inorganic and the organic worlds. Upon the work accomplished by the plants in transforming mineral substances into starches, sugars, oils, and albuminuos substances depends the life and growth of the Animal kingdom. Nor is there any fixed line separating the vegetable from the animal kingdom. The lowest plants and the lowest animals are undistinguishable one from the other. The two kingdoms however represent divergent lines ot development. Yet the vital processes of Nutrition and Reproduction are essentially the same in each, the nutritive processes in animals being carried to a more complex degree than in plants, advantage being taken by animals of the materials ready made in the tissues in living or dead plant forms.

The cell is the biologic unit. Groups of cells of like character and function in an aggregate organism constitute tissues; groups of tissues make up organs; a collection of organs constitutes an organism. An organism may consist of a cell or of an aggregation of cells. In the aggregate group of cells there may be all degrees of differentiation from that of the homogeneous collection of loosely related cells to those most complex and divergent in character in different tissues. This differentiation has its foundation and explanation in the physiological division of labor.

In the lower orders of Plants are seen the simpler and less differentiated cell groups. The Diatoms and Desmids are examples of single cells living independent lives, as does the Amoeba among Animals, one cell performing all the functions of Nutrition and Reproduction. Recep-

tion of air and food, or breathing and eating, absorption and assimilation, by which the body lives and grows, exertion, by which the wastes are discharged, and also the intricate process by which through cell division, the preservation of its kind is accomplished, all these functions are resident in a single cell, and this often of microscopic size.

One of the fresh-water Algae, the Spirogyra, called pond scum, or green slime, or sometimes, absurdly, frog-spittle, is an example of a simple aggregation of vegetal cells. These grow in the spring from a spore which has been lying in the water during a period of rest. This spore under the proper conditions of warmth and moisture begins active physiologic work, and soon by subdivision of itself through the process of cell division an immense number of elongated green cells has been produced. These in turn produce resting-spores like the first and so the cycle of life is completed.

In the higher order of plants the vegetetative and productive processes become more and more distributed to special cell-groups. More and more, homogenous cell aggregates become differentiated into tissues and special organs.

The Fungi constitute a degenerate class of plants, but they illustrate the principle of differentiation. They have neither root nor digestive organs (leaves). They lack Chlorophill, the sunlight using principle of protoplasm. They therefore appropriate from other plants or from organic remains, material which has been already digested. They are specialized for stealing. The so-called order of Lichanes is really a partnership between Algæ and Fungi, in which by mutal accommodation each helps the other, a sort of physiological union into a social family.

The Mosses have groups of cells which more

especially take up materials for the support of the plant while others perform the work of digestion. Others still act as servants which hold the plant in place. Mosses have not true roots, but they have absorbent, digestive and special reproductive organs. They are improved in structure over the lower orders of Algæ and Fungi, and anticipate the still higher Ferns and Phanerogams.

In the Ferns special absorbent organs, roots, conducting and storage organs, stems and digestive organs, fronds and special productive organs, spores, have been developed.

Finally the differentiation of cells and the development of tissues, and the organization of these for special functions has gone to the highest extent in the Flowering Plants or Phanerogams. The typical Flowering Plant consists of three more or less complex organs, the root, the stem and the leaves. All the parts of the plant are some special form of the tissues of these. They are aggregates of cells each made up of a number of tissues, and each does its own peculiar kind of work for the plant organism. The organization of plants into "societies" or colonies is an expression of the adaptability of individual organisms to conditions of environment and the requirements of the tissues.

Zoology and Physiology.

(Zoology one term; Physiology, two terms.)

Biologic science deals with the phenomena of vegetal and animal organism. Animal biology is represented by the science of zoology. Physiology is the science of the higher biologic functions represented in the animal, man. A course in animal biology may therefore include the sciences of zoology and physiology. By the study of type forms of the animal kingdom a general idea of biologic processes is gained. In the amœba the simplest and most

general of the animal life functions are represented. In the hydra, higher and more complex functions occur; the biologic processes proceed from the more general to the more specialized. In the mollusk and the worm physiological differentiation has gone still further. The general property of irritability is no longer manifested by all parts of the body alike, but is localized in a nervous system. So digestion is no longer a general function of the body-mass, but a definite alimentary tract has become specialized. Similarly special organs of circulation and excretion have been developed. In the crustacean and insect these functions are still more highly specialized. Among vertebrate types the fish occupies the lowest rank, because specialization has been carried less completely out than in any other of this branch;yet the fish represents a degree of specialization in structure and in function far exceeding any invertebrate animal. The sluggish circulation of the fish (often called cold-blooded) and the yet simple digestive tract and nervous system are surpassed by those of the air-breathing and hence warmer blooded reptiles, between which appear the intermediate amphibians; and these are in turn surpassed by the birds with high blood oxidizing powers, elaborate digestive tract, and organs of special sense. And finally the maximum of specialization, the higher development in anatomical structure and physiological functions, is represented in the mammalia class. At the head of this great and varied class, mammalia, stands man—the highest type of organic specialization, the one transcending all other types in the climax of the property of irritability—self-conscious spirit.

The study of anatomical structure and physiological functions of representatives of the lower orders constitutes an introduction to the science of zoology. The simpler physiological processes in these forms prepare for the more

complicated problems of human physiology. In the latter the vital functions of nutrition and excretion have reached the maximum of complexity. The intricate phenomena of anabolic and katabolic change are fairly met only when preceded by the more general study of zoology—the life processes of the lower animals. The science of human physiology leads on the one hand to hygiene and the study of sanitary conditions and to pathology and, on the other through the study of the special phenomena of irritability, to psychology.

Geology.

The science of Geology is one of the most fundamental of the natural sciences. It deals with the earth as the physical basis of organic phenomena. The science is a comprehensive one, embracing a diverse range of subjects. Mining and metallurgy, mineralogy, crystalallography, vulcanology, seismology, are departmental sciences of this great subject. They all directly or indirectly bear upon the physical relations of organic forms upon the earth. Under the phenomena of organic life are included all plant and animal relations; and these include the refined and special phases embraced in Geography, Economics, and Sociology. History, which is the written record of what has been done by the self-conscious animal, Man, is determined ultimately by geologic factors. The phases of the science which bear more directly upon organic relations are Physiography, here used to mean the evolution of land forms; and the development and distribution of plants and animals, which includes historic biologic evolution as revealed in the fossil remains of the earth, and the geographic distribution of plants and animals so far as determined by topographic conditions. The earth is the common mother of us all; and geology deals with the earth in this sense, viz., with the form of the landscape, with the character of

the land itself, and hence with the factors which determine the life of man and animals. It is therefore a basic factor in the study of the biologic sciences, and in economics. Before rail roads, rivers determined lines of travel, and hence the distribution of population. Rivers have done more than this: they not only have determined the location of cities and given direction to the character of the resources of a region, but they still determine the trend of rail roads, and, by their relations to the soil, the industries of the people. Not only that the overflowing of the Nile should have given rise to the greatest civilization of ancient time, not only that the geologic fact of a great lake-bottom should become the greatest cereal-food producing area in the world, but every river in every land is modeling the face of the landscape and changing the character of the soil; thus these environmental factors are moulders of civilization.

Astronomy.

The word Astronomy means literally star-arrangement, or the orderly distribution of the bodies of the universe in space. The largest conception, spatially considered, which human intelligence is called upon to grasp is that of the UNIVERSE. As our knowledge of the stellar bodies in space extends the more clearly does it seem that the Universe is a great system, controlled by uniform and universal law. So far from the stars being "fixed," they are now known to have proper motions in space, and some of them at least are now shown to have motions corresponding to the orbital motions of the planets of the Solar System. The Galaxy or 'Milky Way' is made up of a very great number of stars, some brighter, some fainter, and many invisible except by the aid of the modern telescape, - - - - - a great zone of Star-dust, as it were. This Galaxy circumscribes the visible Heavens. Nearer to it

are the greater number of the brighter Stars of the heavens. In its neighborhood are the greater number of the resolved nebulae and multiple stars. In the regions roughly 90 degrees of arc from this zone the irresolvable nebulae are more numerous.

The Sun, which is the centre of a System better known to us because of its nearness is a star which, viewed from the distance of the nearest fixed star, would be of about the second magnitude. Its system of revolving secondaries would be too small to be seen or known. The Sun and attendant planets composing the Solar System may therefore be a type of other Star systems, the attendant satellites or planets of the Star-suns not being of sufficient size to enable us to know of their existence. The Sun, the planets and the satellites are all bound into a system by the great principle of gravitation. This principle is probably the key to the explanation of the origin of the individuals of the system from a common mass, the Sun.

Many multiple stars have been resolved into systems in which the components have a similar definite gravitative relation to each other to that of the Sun and planets. And many supposed nebulae have been resolved into multiple stars. But there are irresolvable nebulae, nebulae which no power of the telescope or spectroscope has shown to be made up of component individual bodies, and which the spectroscope has shown to be nebulous.

We may therefore conceive of the UNIVERSE as a great SYSTEM controlled by the law of gravitation, in which all the stars are component members of the whole, the Sun being one of the multitude of the stars, and each star one of the multitude of Suns, and these all moving through space in definite directions (and it is known that the fixed stars do have proper motions.) The Milky Way may therefore be thought of as the equatorial belt or zone

of the Universe, where are aggregated the greater number of the stars in response to the same law of centrifugal force in a rotating mass as that which causes an equatorial bulging of our terrestrial sphere. The equatorial diameter of the Universe would therefore be greater than the polar diameter, for the same reason that this is so in the earth and other planets, due to rotation. In the region of this equatorial zone the greater number of the brighter stars, and a large percentage of all the stars are grouped. The heavens are more barren of stars, and the irresolvable nebulae, the more flocculent patches of nebulous cloud, those which have not yet integrated into more solid form, are more numerous in the polar regions of the Universe sphere.

From the vast distance it is impossible to discern the planetary bodies, if any exist, which attend upon other Suns than ours. Binary and multiple stars however furnish an analogy to our Solar system, for the components of a double star revolve around each other in orbits of known extent and with computed periods.

Our sun is a star having a group of attendant planets instead of the corresponding component such as would be the case in a double star, or as in a multiple system. Whether the Nublar Hypothesis correctly explains the origin of the Solar System may, in the light of recent investigations, be fairly questioned. But to explain the structure of a system it may not be deemed necessary to explain its origin. There would seem to be a marked similarity, amounting to uniformity and suggesting uniformity of origin binding the whole into one great system, in the structure of the Solar System, the binary and multiple star system, and the somewhat hypothetical universe-system.

With this view, the whole Universe is a progressive,

orderly system tending onward in a series of successive changes of infinite extent. Systems within the Great System may be born, develop and perish, while the Great Whole moves on through an ever endless series of Eternities.

LATIN.

IDA B. MOORE.

(Three Years.)

Latin is entitled to a place in the cirriculum of a Normal School because of the light it throws upon English. The student's conception of English grammar is broadened and deepened by a study of Latin grammar. The more elaborate system of inflection of Latin and the very strangeness of the unfamiliar language compel attention and re-require observation of thought relations and the ways of expressing them. At almost every step there are opportunities for making instructive comparisons between the two languages. Comparative grammar gives an insight into the construction of many an idiom that would otherwise seem in explainable. The essence of mood is more clearly grasped with the assistance Latin can give, because it offers, in its different forms for different moods, something more tangible and definite.

The student of Latin appreciates fine distinctions in the use of words to a degree almost if not quite impossible to one who knows no Latin.

To any one at all conversant with language studies, our Commissioner of Education, Hon. Wm. T. Harris, will seem to have spoken very fairly as well as very forcibly, when he says that the English language "though Germanic or Teutonic in its colloquial vocabulary and in

its gramatical structure, nevertheless resorts to Latin and Greek for all of its technical words, and for all those words which express fine distinctions of thought or subtle shades of sentiment. * * The language of the Romans is the language of the political and civil organization of individuals into institutions, and these constitute our civilization. For the most part, words expressing civil and political relations in all the languages of Europe are Latin." It is apparent that a knowledge of the elements of Latin would be equally beneficial to those who in a life of leisure desire to cultivate an appreciation of literature, and those who take up the burden of citizenship and assume directive power over affairs. Certainly it is important that the teacher, of all persons, should be a master of the language in which is expressed the civilization in which he lives, and that he be able to confer that mastery upon those who are to take their places in it, and take up the duty of carrying it still farther.

Nor is it to be forgotten that the teacher's general culture should not be neglected while he is making special and technical preparation for his work. It is the aim of the work in Latin to awaken in him an appreciation of the language and literature of Rome and to give him a glimpse of her contribution to modern civilization. Endeavor is made to ground the student thoroughly in the elements of Latin and to use so well the time allotted to it that those who desire to continue their work in higher schools may find themselves at the least possible disadvantage.

Latin is begun in the second year of the course. During the year the elements of the language are studied and complete mastery of forms is the predominant aim. At the same time elementary points of syntax are learned and much attention is given to word formation—roots,

prefixes and suffixes. It is believed that with mature pupils better results are obtained by the use of the systematic grammatical method than by the so called inductive method. The second year of the Latin course is devoted to Cæsar and Cicero. Two books of Cæsar and two orations of Cicero are read accompanied by a systematic study of Latin grammar and composition. In the last year of the course six books of Virgil's Æneid are read and the emphasis is shifted from grammatical structure to literary workmanship.

Department of Music, Drawing and Penmanship.

KATHARINE C. LAFFIN.

MUSIC.

(Two Terms.)

Music as a branch of study may serve as a valuable aid in physical, intellectual and moral culture. The schoolroom in which singing is a daily exercise is pervaded with an atmosphere of true culture and refinement.

The rapidity with which the mind must work to see at a glance the tonal and rhythmic relations of each note, to grasp the musical phrase, to read the words connected with it, to give the proper rhythm, and the variations required in power and time, demand a concentration of attention the educational value of which is very great.

Musical perceptions and intelligence in reading music are based upon a knowledge of the tonal relations existing in the intervals of the Major Scale which is the unit of thought in tune. The ear must be trained to recognize these tonal relations, the eye to recognize the notation, peculiar to each, on the printed page, and from these mental impressions must come their expressions in pure, soft quality of tone.

The ability to read at sight depends upon quick perception of tonal relations, a knowledge of rhythmic relations and a knowledge of musical notation.

FIRST TERM.

I. Melodics.

Development of Major Scale. Study of tonal relations with reference to given tonic. Major Scale in all keys. Chromatic tones. Musical notation.

II. Rhythmics.

Plain forms of rhythm with undivided beat. Metronome work. Thinking time. Keeping time. Rhythmic notation.

III. Dynamics.

Voice work. Mechanism of human voice. Care of voice. Use and abuse of voice. Quality of tone. Volume. Force. Exercises for development and improvement of voice.

IV.

Rote singing and its place in school music. Part singing. Modulation. Harmonious effects.

V.

Simple counterpoint.

VI.

Culture value of music: (a) Physical. (b)Intellectual. (c) Aesthetic. (d) Ethical.

SECOND TERM.

I.

More difficult intervals. Development of Minor Scale. Development of Chromatic Scale.

II.

Exercises in greater rhythmic difficulties. (a) The divided beat. (b) Syncopation.

III.

Advanced work in voice culture. Interpretation of school song with illustrative lessons.

IV.

A brief course in the history of music.

V.

Method, or adaptation of phases of the work to corresponding stages of development.

Chorus Singing.—A very essential part of the musical training is the daily chorus practice given the entire school. The voices are tested and properly classified, each student receiving individual attention in being assigned a place in the chorus. The study of standard secular and sacred choruses forms a vital part of the daily rehearsals, contributing in a large measure to the musical growth of the student body.

Drawing.

(Two Terms.)

The aim of the course is to give students skill and freedom in the use of drawing as a language and to lead them to an appreciation of the beautiful in form and color as revealed in nature and in the study of works of art. The correlation of the subject with the various branches taught in the public school is shown and an effort is made to give skill in the use of drawing as a means of illustrating the picturable elements of other branches of study. The rudiments of drawing, both Mechanical and Free Hand, are presented under the three divisions of drawing as to use, namely: (a) Representation, appearance of form. (b) Construction, facts of form. (c) Decoration, or enrichment.

FIRST TERM.

I.

The study of form as seen in Nature—including

plant and animal study as well as out-door sketching and pose drawing for illustrative purposes; the study of Form from geometric solids and from common objects applying principles of free-hand perspective.

II.

The study of color as used in connection with sketching from nature, in simple decorative design from copies, and in simple original decorative design. Light and shade with pencil and charcoal.

III.

Expression. Clay work. Paper folding and cutting. Making of objects from developed patterns. Freehand drawing from geometric solids and from nature affording practice in the use of the different mediums—charcoal and pencil drawing, water colors, brush and ink. Blackboard illustrating: (a) Drawing from dictation. (b) Drawing from memory.

IV.

The aesthetic element. Schoolroom and home decoration.

V.

Adaptation of phases of the work to corresponding stages of development in primary and intermediate grades. In the rural schools.

SECOND TERM.

I.

Mechanical drawing. Use of instruments. Working drawing. Original design.

II.

Elements of picture making. Grouping unity. Variety. Repose. Perspective. Point of vision. Horizon line. Effect of light and shade. Application of the foregoing in charcoal and water colors.

III.

Decorative forms. Unit of design. Arrangement. Historic ornament.

IV.

Color and its relation to beauty: (a) Spectrum scale. Shades. Tones. Tints. (b) Harmonious combinations. (c) Color in nature and in art.

V.

Adaptation of phases of the work to corresponding stages of development in the common schools.

Penmanship.

(One Term.)

The student is taught to appreciate the value of good penmanship, is required to become a legible and rapid writer, and to know how to secure like results as a teacher of the subject.

The vertical form of writing receives the most attention. Arguments for it are now accepted by progressive educators. There is no longer any doubt but that it is more legible, more hygienic, simpler and more rapid than the slant.

I.

Theory:

(a) Position—of body, of paper, of pen.
(b) Physical movement.
(c) Study of form of letters to facilitate the getting of the mental picture of the letter.
(d) Elements of letters. Spacing.
(e) Classification of letters.

II.

Practice:

(a) For form and movement.
(b) For speed in writing.

III.

Discussion of various forms of writing, with special attention given to the advantages of the vertical form.

IV.

Methods of teaching.

Department of Mathematics.

CLYDE R. TRAVIS.

ARITHMETIC.

Number is the relation of one magnitude to another; and its use is to measure magnitudes, i. e. to express the value of measured magnitudes in terms of unit magnitudes.

Every measurement necessitates three elements;—magnitude to measure, unit of measure, and number.

All work in mathematics consists of relating quantities, correctly judging their quantitative relation, and expressing this in intelligible terms.

There is a gradation of quantitative judgments from simple to complex, e. g. this and not this, inequality, equality, number as definite multitude, etc., and the prospective teacher must discover this gradation.

The general truth common to all the facts of arithmetic is the idea quantitative relation involved in every measurement, and it is in the light of this truth that these facts must be identified.

Upon examining the subject matter of arithmetic in the light of this general truth, it is discovered that but few general principles are involved, and that these are involved in many phases sometimes being difficult to recognize:—It is seen, for example: that the principles of division are

involved in cancellation, in reduction, multiplication, and division of fractions, and in proportion; that the problems involved in topics such as lumber measure and applications of percentage are identical with the three general problems in number growing out of the fact of there being three elements in every measurement; that illustrative examples must be carefully selected and graded; and that since all topics involve the same general problems, great care should be taken to prevent using examples to illustrate fractions which belong under some more complex application of number.

The idea equality is a fundamental idea underlying all mathematics, and all solutions depend upon the axioms relating to equals; hence the importance of the teacher's appreciation of these axioms.

In the work in arithmetic the above ideas are induced through the study of number as to its origin, its development, its expression, and its applications, and the pupils are thus led to see the facts of arithmetic in their relation.

Method in Arithmetic.

"Having seen in arithmetic, products of sense-perception, memory, imagination, the understanding and the reason; having seen in psychology, the laws and conditions of sense-perception, memory, imagination, the understanding and the reason; and having seen in the science of education, the adaptation of phases of subject matter to corresponding stages of mental growth and the art and devices which may be employed to stimulate the mind of the learner to appropriate the phase of a subject which it is capable of grasping at a given stage of development," the student now studies "the order in which the phases of arithmetic unfold to the intelligence of the learner and also the means to be employed to stimulate him to take the successive steps involved in a mastery of

the subject," which study constitutes method and devices in arithmetic.*

In the study of method and devices in arithmetic the following principles are discussed:

Number is quantitative relation, and all work in number necessitates the forming of quantitative judgments.

There is is a graduation of quantitative judgments from simple to complex, and the mind must apperceive the simple in order to be able to apperceive the complex.

The judgments, to induce the mind to see each, should be concreted in magnitudes whose relative size may be determined easily.

The first conception of number is that it is the thing numbered, and the mind grows into the habit of seeing number as relation through many experiences of quantifying.

In the early stages of number work there should be constant calls for perception, judging, and verifying; and the work of the learner must be free work. No ready-made judgments should be given him.

The judgment should be made concerning; first, magnitudes present; second, magnitudes absent; third, numbers; and the mind should thus be led to abstract number and see it as relation.

All elements of a comparison should be presented to the mind for consideration.

The material used in illustrating number truths should be simple, free from diverting relations, and such that the number idea of it engages the attention.

In number, as in reading, the mind should appropriate an idea and then learn the symbol for it, first the oral symbol then the written; and great care is required

* For fuller discussion of the above see "Correlation of Professional Work" in the statement of the "Theory of the School."

lest the child fall to memorizing the names of number sums, differences, products and quotients.

The facts of addition, subtraction, multiplication, and division found in the tables must become as familiar to to the child as do the letters of the alphabet.

Since integers and fractions are one in kind, differing only in degree, the former arising through the synthesis of units and the latter through their analysis, they should be so presented as to show their identity.

All spplications of number involve the same general problems. The "cases" of percentage are not peculiar to percentage. In every application of number, "cases," i e, general problems, are found.

There is a mode of presentations for the applications of number;—measurements of areas, volume and capacity, wood measure, interest, commission, etc.,—which leads the pupils to see the unity of these topics through seeing the general problems involved in all.

To be qualified to teach any application of number to pupils, the teacher must know it in actual business, must have run "the fingers of his mind around its edges" in everyday life.

The elements involved in an application of number should be so presented that the pupil may see their business relations and can properly relate them.

The demands upon the pupil should be such as to make of him an investigator and not a reproducer. He should be able to determine possible relations of elements after he sees the elements.

Algebra.

Algebra differs from arithmetic in that it deals with number as expressed in general symbols. Here, as in arithmetic, we find two lines of work, viz: statements made and operations performed.

To most students the language and terms of algebra are indeed strange. The work begins with statements, in equations, of simple problems and the solution of these to introduce the meaning of teams.

No rules are given for work but rather the pupil is led to see the meaning of the expression, say $x-[2x-4x]$, and then to determine what must be done to simplify it. He is led to see that only four operations can be preformed upon equals without destroying their equality and to see that it is only by performing some or all of these that an equation can be solved.

In algebra, as in arithmetic, much oral work is done, especially in solving equations for practice. The aim here and the method are largely as in arithmetic.

The work done covers the matter presented in texts for high schools.

Geometry.

The Geometrician uses axioms and definitions as his earliest major premises and deduces truths. Then uses these truths also as major premises deducing yet other truths, and thus builds a science of quantity in extension.

Every truth is established by means of deductive reasoning and the language of geometry is that of logic in clearness. Hence the student is carefully led to see the sequence of geometric truths, to use the syllogism, and to distinguish between exact statements and those nearly exact.

Much of the classroom work consists of the development of series of propositions. For example, a figue is represented on the board and truths are stated or written by class. Then some auxiliary construction is added and any additional truth is given with the proof of its truthfulness. By this means a series of several propositions is sometimes deduced and the true meaning of the corollary is seen.

Besides, the student learns his own power and becomes independent of the text and freed from its language.

English Department.

THOMAS HOWARD GROSVENOR.

GRAMMAR.

Every study or science contains a fundamental idea which determines what facts belong to its subject-matter and what do not, and also the relation of each fact to the subject-matter as a whole and to every other fact in it. The fundamental idea in the science of grammar is this: the sentence, an instrument the only use of which is to express a thought. Grammar, therefore, deals with the sentence as determined by the thought. By this idea all the different facts of the study are organized into a science. The aim of the work is to lead the student to gain a scientific knowledge of the subject.

The work falls into four main divisions.

In the first division the fundamental unity of all sentences is discovered by working with sentences of various meanings and forms. Their universal attributes are determined. The student sees that the only use of the sentence is to express a thought; that every fact of the sentence must be viewed in the light of this use, and referred to it for its explanation; that a sentence has three essential parts, a subject, a predicate and a copula, because the thought that it expresses has three essential elements.

In the second division the work is still with the sentence as a whole. Sentences are divided into subclasses on the bases (1) of their purpose or meaning, and (2) of their form or number and rank of thoughts expressed. On the first basis sentences are declarative, interrogative,

explanatory and imperative. On the second they are simple, complex and compound.

In the third division of the work the sentence is studied as to its organic parts. The parts of speech are defined and classified as are modifiers. Simple, complex and compound sentences respectively are studied as to (1) the words used in forming them, (2) the uses of these words, an (3) their modifiers.

In the fourth division the parts of speech are dealt with in detail. The work on the noun will serve as an example of what is done with each. First the noun is divided into its classes—proper, common, class, collective, concrete, abstract, etc. Then its properties, gender, person, number, and case are worked out.

The method of work may be called the laboratory method. The student examines the sentence and is led to make his own definitions, classifications, etc. There is both analysis and synthesis. The facts of the subject are studied in their relation to one another and to the sentence as a whole.

The library contains a fine selection of standard texts which are constantly used as reference books.

Reading.

(One Term.)

Reading is the language study the purpose of which is to give a mastery of the printed page as the expression of thought. There are two kinds of reading. They are silent reading and oral reading. The first has for its end the interpretation of the printed page; the second, the adequate expression of the thought, to others, in the words of the author. Obviously good silent reading is the condition of good oral reading.

Aside from the main purpose, reading serves other ends. Through the study of good literature, a taste for

it is formed; the aesthetic nature is cultivated; and through the contemplation of noble characters the reader is stimulated to be like them.

The work in the silent phase of the subject is planned to give the student a better knowledge of the printed page as a symbol of thought, to show him how to overcome its difficulties, and to prepare him to read well orally. To read well orally one must read understandingly. All other reading is mouth reading simply.

The elementary principles of literary classification and analysis are worked out as far as possible inductively from masterpieces of discourse. All discourse is manifestation of mind. It is an appeal to mind. Because of the threefold natnre of mind there are three kinds of discourse. These are didactic, emotional, and ethical, discourse. Because the ideas treated in discourse are particular and general, there are different forms of discourse; description and narration setting forth particular ideas, and exposition and argumentation, general ideas. These forms of discourse are carefutly analyzed. Since a great deal of discourse is figurative, the figures of speech are defined and classified.

The aim of the work in oral reading is to remove difficulties which prevent correct oral expression of the thought of the printed page. The topics treated are: the sources of good expression; the elements of good expression, articulation, syllabication, and accent; pronounciation, its standards; consonant and vowel sounds, their classification and analysis; diacritical marks; etc. A part of each day's recitation is the oral reading of selections assigned for classification and analysis.

Rhetoric and Composition.

(Three Terms.

The problem of rhetoric and composition is how to

adapt discourse in harmony with its subject and occasion to the requirements of the reader and hearer. There are two main divisions in the subject. These are style and invention. Style deals with the manner of expressing thought. It comprises the construction of sentences and paragraphs and their combination to form discourse, and has to do with the mechanical features of the subject. Invention is creative. It consists in the working out of a line of thought through an outline to its final form. It implies the finding, the selecting, and the grouping of material.

The work in style comprises the study of the following topics: choice of words; phraseology; qualities of style, force, rapidity, life (figures of speech); smoothness, the sentence; punctuation; the paragraph, etc.

The work in invention consists of the analysis of masterpieces of each of the four forms of discourse: description, narration, exposition, and argumentation to determine their underlying principle and particular attributes, and the writing of original examples of each of these forms.

A great deal of written work is required. This is carefully criticised and returned to the student. The material for the compositions is drawn almost entirely from the experience of the student. The work is therefore original.

English Literature.

(Three Terms.)

The work in this subject is planned to give the student, as far as possible in the time allowed, an introduction to the great names in English Literature, and to guide him in the development of his literary taste.

The work is concentrated upon the authors themselves, and there is no attempt to give a historical survey

as such. But each author is studied in the light of the time in which he lived and his influence upon his time. A birds-eye-view of the whole field is thus given. Among the authors studied are: Chaucer, Spenser, Shakespeare, Milton, Swift, Addison, Gray, Goldsmith, Keats, Scott, Tennyson and Browning.

The class work consists of readings from the works, oral and written discussions, special reports and papers.

The library contains a fine selection of reference books, and nearly all the great authors are represented by selections from their works.

Method in English.

(Six Weeks.)

This work comprises method in reading, language, and grammar. The central idea in each subject is worked out first, and then, by means of it, the subject matter, its divisions, their relative importance, and the order of their presentation are determined.

Catalogue of Students.

FIRST GRADUATING CLASS, '95—15.

Boyum, E. E.	Jennings,	La
Brumwell, Milton	Hatton,	N. D.
Butler, W. H.	Sherbrooke,	"
Courtney, W. J.	Page,	"
Dallas, David	Sherbrooke,	"
Frazier, L. J.	University,	"
Morrish, W. J.	Page,	"
Putnam, Grace B.	New Rockford,	"
Allen, (Saunders), Ida B.	Dickinson,	"
Sinclair, J. H.	Cooperstown,	"
Smith, R. L.	Grand Forks,	"
Sonderall, J. B.	Velva,	"
Springen, Sophia H.	Mayville,	"

Warren, E. G.	Brisbane,	N. D.
Williams, Louis	Mayville,	"

SECOND GRADUATING CLASS, '96—13.

Boyum, George	Jennings,	La.
Brown, W. G.		
Belanger, Kittie	University,	N. D.
Kaldor, Theodore	University,	Minn.
Koppang, Sophia	Portland,	N. D.
Anderson, (Larson), Louise	Mayville,	"
Moen, Ida	Mayville,	"
Mooers, W. G.	Devils Lake,	"
McDonald, N. C.	Langdon,	"
Patterson, Henry	Hoople,	"
Sunderland, T. S.	Grafton,	"
Thams, Fredricka	Fargo,	"
Wambheim, Mary	Hatton,	"

THIRD GRADUATING CLASS, '97—7.

Carlile, A. M.	Blanchard,	N. D.
Hasselquist, Thomas A.	Sherbrooke,	"
Keene, (Josh), Minnie S.	Hope,	"
Keene, Edward O.	Hope,	"
Sinclair, Edith R.	Minneapolis,	Minn.
Thornton, Edgar	Manila,	Philippine, I's.
Mooers,(Walton), Libbie C.	Devils Lake,	N. D.

FOURTH GRADUATING CLASS, '98—3.

Fecher, Gilbert O.	Hatton,	N. D.
Lucken, Emma F.	Mayville,	"
Walbom, Anna A.	Mayville,	"

FIFTH GRADUATING CLASS, '99—13.

Anderson, Sophia	Fargo,	N. D.
Blackorby, Charles E.	Cando,	"
Bolstad, Andrew L.	Mayville,	"
Carhart, Edith Beebe	Devils Lake	"
Colvin, Robert	Portland,	"
Hillier, Geo. H.	Northwood,	"
Halland, Hannah Alice	Fargo,	"

Johnson, Kittie May	Iowa City,	Ia.
Curry, (Long), Adelaide S.	Finley,	N. D.
Moskau, Gilbert	Mayville,	N. D.
Porter, W. H.	Chicago,	Ill.
Rosholt, Ruth	University,	Minn.
Sletto, Anna	Hatton,	N. D.

SIXTH GRADUATING CLASS, '00.—20.

Burdick, Usher L.	Minnewaukan,	N. D.
Berrington, Blanche Frances	Northwood,	"
Cooper, Margaret	Northwood,	"
Cruden, Nellie	Dickinson,	"
Cassidy, James H.	Leeds,	"
Deitz, Helen M.	Michigan City,	"
Hibbard, Mabel E.	Mayville,	"
Keene, Rena E.	Hope,	"
McCarten, Margaret	Larimore,	"
McCarten, Tene	Hope,	"
McCarten, Cinda	Cando.	"
Morrish, Ada Maud	Page,	"
Miller, Albert G.	Oberon,	"
Nestos, R. A.	University,	Wis.
Robertson, Emma	Park River,	N. D.
Sinclair, Sadie J.	Minneapolis,	Minn.
Skrivseth, Bendick O.	Russia.	"
Watkins, Augusta A.	Grand Forks,	N. D.
Wilkins, Coral	Fargo,	"
Wold, Inga	Valley City,	"

FOURTH YEAR.—17.

Adams, Eva M.	Fergus Falls,	Minn.
Anderson, Annie Frances	Mayville,	N. D.
Dolve, Nels O.	Portland,	"
Deitz, Effie	Kempton,	"
Erickson, Mathias B.	Hillsboro,	"
Halldorson, Halldor	Rugby,	"
Hendrickson, Tillie	Grafton,	"
Hillier, Will A.	Hoople,	"

Jones, Charlotte	St. Thomas,	"
Kaldor, Ole O.	Mayville,	"
King, Sylvia L.	Hope,	"
Lynn, Blanche Gurr	Grand Harbor,	"
Morrill, Jesse	Wonewoc,	Wis.
McCarten, Emmett	Mayville,	N. D.
Vinje, Eivin	Dalton,	Minn.
Voge, Ole	Dundee,	N. D.
Willis, Bessie	Fessenden,	"

THIRD YEAR.—15.

Carhart, Margaret	Mayville,	N.D.
Clunis, Viola	Weible,	"
Denoyer, John	Graham's Island,	"
Erickson, Edward	Dundee,	"
Hocking, William	Absaraka,	"
Kuhn, Elizabeth	Pana,	Ill.
Koppang, Olga	Portland,	N. D.
Morrish, Carrie M.	Mayville,	"
Parsons, W. Earl	Page,	"
Poulsson, Eleanor E.	Mayville,	"
Peterson, Eli A.	Towner,	"
Skarperud, Andrine L.	Mayville,	"
Sando, Anna	Portland,	"
Shear, Maud B.	Buxton,	"
Tufte, Erick	Northwood,	"

SECOND YEAR—26.

Arnegard, Anneta	Hillsboro,	N. D.
Arnegard, Andrew	Hillsboro,	"
Arnegard, Oscar	Hillsboro,	"
Burke, Clyde	Blanchard,	"
Cecka, Joe B.	Cummings,	"
Chase, Mary	Reynolds,	"
Chase, Ira	Reynolds,	"
Cooper, Annie	Mayville,	"
Erickson, Clara	Mayville,	"
Erickson, Oscar	Dundee,	"

Forre, Anna E.	Mayville,	N. D.
Green, Pearle E.	Page,	"
Halverson, Ida B.	Mayville,	"
Johnson, Oscar	Hatton,	"
Koerner, Lottie	Portland,	"
Kaase, Theodore	Northwood,	"
Letherman, Edith	Mayville,	"
Lerom, Hattie	Buxton,	"
Lynner, Hilda	Mayville,	"
Monilaws, Frances	Absaraka,	"
McMordie, Margaret	Mayville,	"
Mooney, Annie	Reston,	Manitoba,
Raaen, Aagot	Hatton,	N. D.
Springen, Hans G.	Mayville,	"
Sorenson, Mamie	Buxton,	"
Wilbur, Ruth	Cummings,	"

FIRST YEAR.—88.

Anderson, John G.	Portland,	N. D.
Anderson, Alma	Portland,	"
Bridston, Martha	Thompson,	"
Bonnell, Kittie	Blanchard,	"
Botten, George	Dwight,	"
Bye, Helen	Hatton,	"
Bishop, Mae	Lindsey,	Wis.
Brooks, Mae	Devil's Lake,	N. D.
Bjelde, Amy	Mayville,	"
Black, Annie	Northwood,	"
Bassett, Mabel F.	Mayville,	"
Bathgate, Margaret E.	Park River,	"
Collins, Loretta Rose	Grand Haven,	Wis.
Chilsted, Hannah	Portland,	N. D.
Cooper, Clara E.	Mayville,	"
Cowden, Marie V.	Mayville,	"
Ellingrud, Christine	Hillsboro,	"
Ford, Edward H.	Absaraka,	"
Forre, Chester	Mayville,	"

Grimstvedt, Anna S.	Blanchard,	N. D.
Grettum, Jessie	Mayville,	"
Hanson, Ella	Mayville,	"
Hillstad, Mary	Mayville,	"
Holter, Alfred	Hatton,	"
Holbrook, Birdie	Rugby,	"
Hanson, Anna	Mayville,	"
Hougen, Annetta	Northwood,	"
Halland, John G.	Grafton,	"
Johnson, J. B.	Hillsboro,	"
Jacobsen, Amanda	Grand Harbor,	"
Johnson, Helga	Winona,	Minn.
Jemtrud, Caroline	Portland,	N. D.
Johnson, Ella	Belmont,	"
Keyes, David W.	Absaraka,	"
Kelley, Bernice B.	Crary,	"
Kjelsbeag, Christina	Mayville,	"
Kain, Dorothy	Devil's Lake	"
Kenny, Florence	Conway,	"
Lee, Gilbert O.	Park River,	"
Langlie, Mercedes H.	Cooperstown,	"
Lucke, Esther L.	McCanna,	"
Lucken, Lillie M.	Mayville,	"
Monson, Martin	Hatton,	"
Molden, Gustave	Mayville,	"
Molden, Gena	Mayville,	"
McIntyre, Anna	Mayville,	"
Morrish, Minnie Violet	Mayville,	"
Melhus, Nettie	Blanchard,	"
Mitchell, Jessie	Crystal,	"
McCarten, Edward	Mayville,	"
Newman, Ida M.	Portland,	"
Nehlson, Lillian	Pepin,	Wis.
Orpe, Millie	Soper,	N. D.
Ohlquist, Mamie	Mayville,	"
Osmon, Thora	Portland,	"
Olson Ragnhild	Portland	"

Olson, Dagny	Portland	N. D.
Olson, Inga A.	Mayville,	"
Olson, Henry	Portland,	"
Pladsen, Caroline	Hatton,	"
Price, Elizebeth A.	Pingree,	"
Peterson, Gertrude	Buffalo,	"
Pinkham, Katherine	Eugene,	Oregon.
Peterson, Ella M.	York,	N. D.
Pottle, Earle K.	Portland,	"
Richard, Millie	Absaraka,	"
Rinde, Ambrosia	Dundee	"
Reese, Gustave	Dundee,	"
Swain, Nina A.	Northwood,	"
Swihart, Bertha	Mayville,	"
Skarperud, Mary	Mayville	"
Swain, Mabel	Northwood	"
Simle, Melvin	Portland	"
Sondreaal, Gertie	Hatton	"
Sparrow, Margaret	Primrose	"
Stevens, Jessie M.	Crary	"
Tweeten, Mabella T.	Berwick	"
Thorstad, Inga	Mayville	"
Tennison, Mabel G.	Cummings	"
Webster, Clifton E.	Arthur	"
Webster, Lista	Amenia	"
Warren, Sylvia A.	Mayville	"
Webster, Tedd D.	Amemia	"
Weltzin, Anna M.	Mayville	"
Warren, Kittie L.	Mayville	"
Warren, Lottie	Mayville	"
Wanless, Iva	Devils Lake	"
Wambheim, Matilda	Park River	"

SUMMER SCHOOL.

Anderson, Julia	Hatton	N. D.
Anderson, Frances	Mayville	"
Adams, Eva M.	Grandin	"

Butterfield, Winroy E.	Caledonia	N. D.
Burke, Mabel	Blanchard	"
Bolstad, Bertha	Cummings	"
Butterfield, Effie	Caledonia	"
Bolstad, A. L.	Mayville	"
Berrington, Agnes	Mayville	"
Brown, Charles C.	Mayville	"
Boulger, Katharine	Mayville	"
Bowen, Minnie	Hope	"
Bowen, Zoe	Hope	"
Berrington, Blanche F.	Mayville	"
Brenneman, May	Caledonia	"
Cockran, W. M.	Hendrum	Minn.
Cooper, Margaret	Mayville	N. D.
Chantland, Ellen J.	Mayville	"
Colvin, Robt.	Portland	"
Carhart, Emily L.	Mayville	"
Clunis Viola	Weible	"
Cunningham, Mrs. Kate E.	Galesburg	"
Carpenter, Harry	Hope	"
Christanson, Helen	Buxton	"
Dayhuff, Millie	Hope	"
Dunlava, Nellie T.	Arthtur	"
Erstad, Ildred E.	Hatton	"
Erstad, Inger	Hatton	"
Erickson, Clara	Mayville	"
Forre, Anna	Mayville	"
Giles, Gertrude	Caledonia	"
Hibbard, Mabel	Blanchard	"
Henninger, Carl G.	Sherbrooke	"
Henninger, W. S.	Sherbrooke	"
Hepburn, Margaret	Blanchard	"
Hoose, May E.	Caledonia	"
Harman, Kate G.	Finley	"
Hillerson, Minnie	Hope	"
Hill, Minnie	Hillsboro	"
Hillstad, Mary	Mayville	"

Hynes Rosella G.	Mayville	"
Hynes, Stacia C.	Iron River	Wis.
Herte, Bertha	Portland	N. D.
Johnson, Carl J.	Finley	"
Johnson, Rosa	Caledonia	"
Kuhn, Rose W.	Pana	Ill.
Koppang, Sophia	Portland	N. D.
Koppang, Christina	Portland	"
Lyons, Alice M.	Hope	"
Layman, Blanche	Caledonia	"
Lunde, August	Buxton	"
Lynner, Hilda	Mayville	"
Lyche, Charles A.	Hatton	"
Letherman, George M.	Mayville	"
Letherman, Edith E.	Mayville	"
Larson, Ellen M	Portland	"
Larin, Albena	Mayville	"
McPherson, James M.	Page	"
Miller, Wilbur G.	Sherbrooke	"
Moline, Mary J.	Mayville	"
Moe, Eliza	Hillsboro	"
Morrish, Carrie M.	Mayville	"
McCarten, Edward	Mayville	"
Morrish, Ada Maud	Mayville	"
McCarten, Elsie	Hope	"
McCarten, Emmett	Mayville	"
McCarten, Margaret	Mayville	"
McInnes, Olive	Kelso	"
Nottage, Alice M.	Reynolds	"
Olson, Inga	Mayville	"
O'Brien, Amelia	Blanchard	"
Pladsen, Caroline	Hatton	"
Petro, Estella M.	Reynolds	"
Quamme, Amelia	Hillsboro	"
Rounds, G. H.	Hillsboro	"
Rugland, Clara G.	Portland	"
Rover, Helen	Halstad	Minn.

Rendedal, Julia	Mayville	N. D.
Sando, Olga M.	Portland	"
Sparling, Emily	Clifford	"
Sweetland, Tracy O.	Mayville	"
Sinclair, Sarah Jean	Hannaford	"
Thompson, Tina	Caledonia	"
Wilson, Charles	Caledonia	"
Watkins, Augusta A.	Mayville	"
Warley, Joseph	Portland	"
Williams, Kate	Blanchard	"
Welsh, Mrs.	Blanchard	"

SUMMARY OF ATTENDANCE.

Fourth Year Class	17
Third Year Class	15
Second Year Class	26
First Year Class	88
Summer School	88
Total	234
Counted Twice	13
Net Total	221

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CATALOGUE
NUMBER 14

QUARTERLY BULLETIN

STATE NORMAL SCHOOL

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JUNE
1904

Mayville, N. Dak.

Volume II, Number 1 Year XV

Quarterly Bulletin of State Normal School

Mayville, North Dakota, June 1904

PUBLISHED IN JUNE
SEPTEMBER, DECEMBER
AND MARCH EACH YEAR

CONTAINING THE
Fourteenth Annual Catalog for 1903-1904
WITH
Announcements for 1904-1905

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Farmer Print, Mayville, N. D.

CALENDAR.

1904.

FIRST TERM.

Registration and Assignment of Lessons....Tuesday, July 5
Recitations Begin.....Wednesday, July 6
Summer Session Closes ....Friday, August 12

SECOND TERM.

Entrance Examinations and Registration, and Assignment of Lessons....Tuesday, October 4
Recitations Begin.....Wednesday, October 5
Holiday Vacation Begins.....Friday, December 23

THIRD TERM.

1905.

Entrance Examinations and Registration, and Assignment of Lessons....Tuesday, January 3
Recitations Begin.....Wednesday, January 4
Vacation Begins.....Friday, March 24

FOURTH TERM.

Entrance Examinations and Registration....Tuesday, April 4
Recitations Begin .....Wednesday, April 5
Commencement Day .... .Thursday, June 22

BOARD OF TRUSTEES OF THE STATE NORMAL SCHOOLS.

Hon. W. L. Stockwell, *Ex-Officio*.....Bismarck
Superintendent of Public Instruction.

Hon. Frank White, *Ex-Officio*.....Bismarck
Governor.

C. S. Edwards.....Mayville, Term Expires 1905
Ole I. Moen..... .....Calchutt, Term Expires 1905
Nels Larson.....Dazey, Term Expires 1905
David J. Lloyd.....Burlington, Term Expires 1905
Col Amasa P. Peake.....Valley City, Term Expires 1905
B. S. Russell.....Jamestown, Term Expires 1907
E. Y. Sarles.....Hillsboro, Term Expires 1907
A. L. Martin.....Sentinel Butte, Term Expires 1907
Edward Meilicke .....Wheatland, Term Expires 1907
W. T. Smith .....Kenmare, Term Expires 1907

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C. S. Edwards.....Mayville
B. S. Russell.....Jamestown
E. Y. Sarles.....Hillsboro
Edward Meilicke .....Wheatland
Ole I. Moen .....Galchutt

OFFICERS OF THE BOARD.

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President and Superintendent of Construction.

Goose River Bank,
Treasurer.

Joseph Carhart,
Secretary and Accounting Officer.

COMMITTEES.

BUILDING AND IMPROVEMENTS.

C. S. Edwards — E. Y. Sarles — Joseph Carhart

FINANCE.

B. S. Russell — E. Y. Sarles — Ole I. Moen

GROUNDS.

Edward Meilicke — C. S. Edwards — Joseph Carhart

FACULTY.

SCHOOL OF THEORY.

JOSEPH CARHART, M. A., *President,* Psychology and Pedagogy
IDA B. MOORE, B. A., *Preceptress Ladies' Dormitory*....Latin
CLYDE R. TRAVIS, Ph. B.....Mathematics and Physics
THOMAS HOWARD GROSVENOR, B. L.....English
JESSE LEWIS, B. A.....History and Geography
EDITH BEEBE CARHART.....Librarian and Registrar
C. H. ROBISON, M. A.....Natural Science
EDITH E. BRANT.....
.. ...Music, Drawing, Physical Culture and Penmanship
LAKE G. WATSON, M. A. ..The Art of Primary Instruction
*B. A. WALLACE.....Assistant in English
*W. A. GODWARD, B. A.....Natural Science
*HARRIET B. DEWART.....The Art of Primary Instruction
*BESSIE EGGEMAN .... ..Music, Drawing and Penmanship
*J. F. HETLER.....School Law
State Course of Study, Chorus and Reading Circle Work
*T. A. HASSELQUIST.....State Course of Study, Reading Circle and Assistant in Natural Science
*E. C. OLSGARD, B. L.....State Course of Study, Reading Circle and Assistant in Civics
*C. E. BLACKORBY.....State Course of Study, Reading Circle and Assistant in Geography
*W. R. KILPATRICK.....State Course of Study, Reading Circle and Assistant in Mathematics

SCHOOL OF PRACTICE.

B. A. WALLACE, *Principal.*

ELIZABETH MCMURCHIE.....Critic Primary Grade
AGNES BERRINGTON.....Critic Intermediate Grade
MARGARET RUTHERFORD.....Critic Intermediate Grade
EMMA LUCKEN .....Critic Grammar Grade

*Summer Term, 1903.

OLE OLSTAD..... Janitor

LOCATION OF THE SCHOOL.

Mayville is situated upon the Breckenridge and Larimore division of the Great Northern Railway, about forty miles from Casselton and thirty miles from Larimore, which are on the Northern Pacific and Great Northern Railways respectively. Mayville is one of the most beautiful and thriving of the small towns of the Red River Valley. It has over twelve hundred inhabitants, and offers the modern conveniences and comforts of living. The city is lighted by electricity and has an adequate system of water works. The moral and intellectual tone of the place are attested by the presence of five churches and a free public library representing an investment of twelve thousand dollars. The number of well-to-do farmers who have made themselves homes here in order that their children may enjoy its educational advantages help to make Mayville an ideal location for a Normal school.

Organization.

The State Normal School at Mayville was established by the Constitutional Convention of this state and made a part of its public school system, and was endowed by it with 30,000 acres of land. It was organized in accordance with legislative enactment, under the provision of Article XIX of the State Constitution, and opened its doors for the admission of pupils on the first day of December, 1890.

The Building.

It is a new, handsome and thoroughly constructed building. The walls are of red, sand-moulded brick, and white Kasota sandstone. The inside finish is ash, oak, birch and maple. It is heated throughout with steam, radiators being set in all

rooms; it is thoroughly ventilated by a copious supply of fresh, warm air and is lighted by electricity. Bath rooms are provided for men and for women, and are supplied with an unlimited amount of hot and cold rain water.

Professional Value of Diploma.

FIRST GRADE CERTIFICATE.

The Diploma of the Normal School is a certificate of the first Grade, authorizing the holder, provided he is of legal age, to teach without further examination in any of the public schools of the state for a period of two years.

LIFE CERTIFICATE.

When the graduate has had three years successful experience in teaching and governing a school, the law authorizes the Superintendent of Public Instruction to endorse his diploma making it a professional certificate of the first grade, valid for life.

VALUE OF UNDERGRADUATE STANDINGS.

The Department of Public Instruction accepts the standings of under-graduates of the school in lieu of an examination for teachers' certificates in the subjects covered by the standings.

Relation to the University of North Dakota.

By an arrangement with the authorities of the University of North Dakota the graduate of this school is credited with one year's work at the university. He enters the university with the rank of sophomore and graduates with the degree of B. A.,, when he has accomplished three years work. Its system of crediting for superior work makes it possible for strong graduates of the Normal school to accomplish the University course in two years.

Relation to the North Dakota Agricultural College.

The North Dakota Agricultural College gives to the graduates of this school the same recognition as does the Uni-

versity of North Dakota—graduates him on the accomplishment of three years work.

EXPENSES.

Tuition is free in all departments.

Registration Fee.

By order of the State Board of Normal School Trustees a uniform registration fee is charged as follows: Five dollars for the entire year, to be paid by one entering the spring term; four dollars for the winter and spring terms, to be paid by one entering the winter term; and three dollars for the fall term, to those entering that term.

Text Books.

All necessary text books are furnished by the school, for which a library fee of $1.25 per term is charged.

Boarding.

Rooms and meals in the building cost $12 per month of four weeks, payable in advance.

Meals are furnished in the Boarding Hall to both ladies and gentlemen rooming outside the building, at $10 per month of four weeks, payable in advance .

Board and room in the town costs $3.00 per week. Rooms can be rented at from $ 1to $6 per month, according to accommodations furnished.

By clubbing, students have succeeded in reducing their living expenses to $8 per month each. The work of the school is such as to demand the full available time and effort of the students, and self-boarding is advisable only when special circumstances demand it.

Dormitories.

The Dormitories are upon the upper floor. The rooms are 27 feet in length and are ample for four occupants; are heated by steam and well ventilated with fresh warm air. They are furnished as double rooms, each room being carpeted and sup-

plied with two large bedsteads with springs and mattresses, two washstands, with set of bedroom ware, two bureaus, two tables, and is lighted by electricity. The Preceptress rooms upon the same floor and has full charge of the Dormitory. Ladies are admitted in order of applications. Each one should bring with her one pillow, two pairs pillow slips, two pairs sheets, a woolen blanket, a comfortable, a spread and towels. Occupants of the Dormitory will be expected to take entire care of their rooms.

Water-closets and a bath-room furnished with hot and cold water are upon the Dormitory floor.

Normal School Library.

The generous gift of one thousand dollars recently made to the library by Mr. J. L. Grandin has added many standard books to that important department of the school. Different members of the faculty made lists of books that were most needed in their respective lines of work which, added to those already on hand, furnish the means of doing a high grade of work on the library plan. The library is catalogued on the Dewey decimal plan and, with the assistance of a competent librarian, students find they "are enabled to come easily by that which others have labored hard for." In addition to its well selected list of 6,000 volumes the library is well supplied with the best current periodical literature.

Mayville Public Library.

Through the generosity of Messrs. J. L. and E. B. Gradin, supplemented by the enterprise of its public spirited citizens, Mayville has established a free public library, representing an investment of twelve thousand dollars. This sum carefully invested by those possessing peculiar fitness for the task has secured to Mayville a library of very great educational value. In addition to a large list of well selected books and all the leading papers and magazines, the library contains amusement rooms and a well equipped gymnasium. It is located a short

distance from the Normal school, and students are admitted to all its privileges fress of charge.

Literary Society.

A Literary Society is in successful operation. Its meetings are held Friday evenings, fortnightly, and are conducted according to parliamentary usages. They are designed to acquaint its members with the customs and practices of deliberative bodies, to give an impetus to literary investigation and to develop talents for literary work, public speaking, and extemporaneous discussion. Open meetings are held occasionally to which the public is invited.

Religious Privileges.

The Congregational, the Episcopal, the Hauge, the Synod, Lutheran and the Methodist Episcopal churches are represented in Mayville and students are welcomed to them all. Students are advised to identify themselves with the church of their own or their parents' choice and avail themselves to the fullest extent of the privileges of a church home.

Admission.

Entrance requirements :

1. The applicant must possess a good moral character.
2. It is advisable to come recommended by some responsible person, as the county superintendent.
3. If the applicant holds a County Certificate he will be admitted without examination.
4. A common school diploma admits the holder without examination.
5. If the applicant holds neither a County Certificate nor a common school diploma, he will be required to pass a fair examination in Arithmetic, Grammar, Geography and U. S. History.
6. A graduate from a first class High School will be admitted to the Professional Course without examination.

Courses of Study.

The School offers three courses of study :

1. An English course.
2. A Latin course.
3. A Graduate course.

Courses one and two can be completed by strong students, having little or no High School training, in four years; course three can be completed by strong graduates of first class High Schools in one year.

Full credit is given for all High School work accomplished in the schools of our own state and in schools of similar grade elsewhere.

The detailed statement of the course of study and the discussion of the theory of the School, both of which occur elsewhere in this catalogue, will help to interpret this statement.

The School has four sessions, or terms, a year. Three of them, beginning in October, January and April, respectively, each continues twelve weeks; the fourth, beginning in July, continues six weeks. By limiting themselves to few subjects students can make a term's standing in the subjects pursued during the six week's session.

The first term's work of the English courses is offered during each of the four terms of the year. In other words a student may enter and begin his course any term in the year.

General Remarks.

BE PRESENT THE FIRST DAY OF THE TERM.

Inform the President when you expect to arrive, and also when you expect to leave, if it is necessary to leave before the close of the term.

Students must not change or select boarding places without consulting the President.

Students are free to make and receive calls Friday evenings, but other evenings, aside from Sunday, are expected to be devoted to study.

Students, on arriving, should report at once to the President at his office in the Normal School building, which is in sight of the station.

The Normal School desires herewith to thank the Press of the state which has held itself so ready to respond to the needs of the common schools as represented in this institution. Further kindness extended will be appreciated.

We will be glad to send this catalogue to those whom school authorities may desire to receive it, and to co-operate generally with superintendents and principals in all measures to uplift the teaching work in the public schools of the state.

It is important to them that students enter promptly on the first day of the term. The work is arranged to be of special benefit to those who can spend the entire year.

For further information address,

JOSEPH CARHART,
President State Normal School, Mayville, N. D.

OBSERVATION AND PRACTICE IN THE CITY SCHOOLS.

Through the courtesy of the Board of Education of the City of Mayville, our students are permitted to observe and practice in certain designated school-rooms of the city, thus giving them an opportunity to acquire experience under conditions exactly similar to those they will meet with when they are employed as teachers in the public schools. Teachers are selected for such rooms who are especially qualified to exemplify the correct principles of the science and art of education and who are, at the same time, capable of systematic but searching criticism on the efforts of the pupil-teachers.

The pupils taught in the practice school are not enumerated in the attendance given in this catalogue.

The first term's work of the English Course is offered during each of the four terms of the year. In other words, a student may enter and begin his course any term in the year.

COURSES OF STUDY

ENGLISH COURSE

TERMS	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
I.	Grammar Geography History—U. S. Arithmetic Penmanship	Composition and Rhetoric Botany General History Algebra Drawing	Psychology Zoology Literature Geometry	Philosophy of Education Physics Modern History Method Practice
II.	Grammar Geography History—Civics Arithmetic Penmanship	Composition and Rhetoric Botany General History Algebra Drawing	Psychology Zoology Literature Geometry	Philosophy of Education Physics American History Method Practice
III.	Grammar Geography History—U. S. Music Drawing	Literature Botany General History Algebra Drawing	Psychology Zoology (Physiology) Literature Geometry (Solid) Music	History of Education and School Law Physics Economics Theme

*LATIN COURSE				Graduate Course
TERMS	SECOND YEAR	THIRD YEAR	FOURTH YEAR	ONE YEAR
I.	Composition and Rhetoric Botany Latin Algebra Drawing	Psychology Zoology Latin Geometry General History	Philosophy of Education Physics Latin Method Practice	Practice Psychology History and Philosophy of Education Review Method
II.	Composition and Rhetoric Botany Latin Algebra Drawing	Psychology Zoology Latin Geometry General History	Philosophy of Education Physics Latin Method Practice	Practice Phsychology Hist. and Philos. of Educat'n Review Method
III.	Literature Botany Latin Algebra Drawing	Psychology Zoology (Physiology) Latin General History Music	History of Education and School Law Latin Phyics Theme	Psychology History of Education and School Law Review Method Theme

*The first year of the Latin Course is identical with the first year of the English Course.

THEORY OF THE SCHOOL.

Purpose.

The aim of this chool is to prepare young people for the teaching service of the State of North Dakota. To the extent that the purpose of an organization determines its character all the work of the school is professional. It does not give general culture for its own sake; it does not aim to prepare young men and young women for college, nor for the general pursuits of life. It gives general culture; its graduates are admitted to advanced standing without examination to the State University and to other colleges; its professional work upon the common school branches and other subjects includes a preparaiton for business, and the moral education which qualifies young men and women to be safe guides for the state's children is a good preparation "for complete living" and is beneficial in all the walks of life; but these results, though actual, are incidental and are accomplished because the part is necessarily included in the whole.

While the applicant for admission to the school is not required to pledge himself to teach in the public schools of the state, and while it freely admits to all privileges young men and women of good character and earnest purpose, provided they are willing to submit themselves to the thorough training in scholarship and to conform to the high ideals of conduct demanded in a school for the training of teachers, the management keeps constantly in mind the statute which declares that "the object of such Normal Schools shall be to prepare teachers in the science of education and the art of teaching in public schools." The school qualifies its students for various phases of public school work, from the primary grades to most departments of the High School, but its curriculum and training

are especially adapted to give superior qualifications for the work of the first eight grades of the public school system.

The vital importance of this phase of public school education is apparent. The following words of Edward Everett, uttered as governor of Massachusetts at the opening of the first Normal School established in this country for the purpose of improving the public schools, have greater weight today than at any previous time, and apply with peculiar force to North Dakota: "No rational man, it seems to me, can fail to see the superior importance of the common schools. They give the keys of knowledge to the mass of the people. If there be any persons to whom the words 'common school' and 'common school education' convey an idea of disparagement and insignificance, such persons are ignorant, not merely of our true political sytsem, but of the nature of man. Our common schools are important in the same way as the common air, the common sunshine, the common rain—invaluable for their commonness. They are the corner stone of that municipal organization which is the characteristic of our social system. They are the foundation of that widespread intelligence which, like a moral life, pervades the country; they are the nursery of that inquiring spirit to which we are indebted for our preservation of the blessings of an inquiring spiritual faith."

The great material resources of this state have caused an influx of people from other states and other nations. In constantly increasing multitudes they come from many climes, representing many theories of government, different religious convictions, and speaking a multitude of tongues. This heterogenous multitude is to be formed into a homogenous people. The most efficient means of accomplishing this result is the common school. Resources are not wanting. The public school fund is ample; school houses already numerous, are rapidly multiplying, and the call for trained teachers is most urgent. It is the special function of the Normal School to supply this demand.

As teachers in country schools and graded schools of the city, as principals of high schools and superintendents of city schools, and as county superintendents, graduates and undergraduates of this school are rendering to society efficient and honorable service and are receiving a money compensation varying according to ability and experience, but averaging well with that received in other professions. In qualifying young people to secure the boys and girls of the state in their common school rights the Normal School employs the following

Means.

1. The school gives to its students a thorough, scientific knowledge of the branches they are to teach, such as reading, grammar, arithmetic, geography, history, etc. Students come to the school knowing many of the facts of these subjects, but, having studied them in the grades below the high school, they have not organized the facts into a scientific form nor learned their educational value in developing the minds and enlarging the information of the pupils of the public schools. A knowledge of arithmetic and grammar that enables one to perform accurately and quickly the problems of the counting room and to construct sentences correctly does not qualify him to use to the best advantage the science of number and the logic of the English sentence as educational instruments. A teacher must be able not only to practice correctly the art, he must have a conscious mastery of the science of each of the common school subjects of instruction. He must know each fact, and know it in relation to every other fact of the subject, and know the relation of all the facts to the general truth which distinguishes a given subject from all other subjects. True knowledge is thought in the mind corresponding to the thought in the subject studied. If the thought in the subject studied exists in an organic form, true knowledge discerns the inherent relations existing between the parts of the subject and sees the relation of each part to the general truth which explains the part and determines its place in the subject. The particular and the

general act and react upon each other. The general truth must be discerned in the particular fact, and the general truth is the explanation of the fact. In true knowledge each explains all and all explains each.

The Hon. Wm. T. Harris, LL. D., United States Commissioner of Education, speaking from a wide knowledge of facts and a sound theory of education, has indicated in the following the true place of the common school subjects in the Normal School curriculum:

"The substantial Normal School course deals chiefly with the common school branches, reading, writing, arithmetic, geography, history and grammar. It is often said by way of apology that could we secure pupils of advanced grades this would be unnecessary. We are obliged to do this elementary work in our Normal Schools because of the fact that pupils come to us ill-prepared as regards these studies. But no matter what grade of pupils the Normal School ever receives, its professional work is chiefly done on the common branches, the reason being this : no matter where the pupil learns his common branches he learns them as steps in a graded course, and when he has climbed to the higher steps he drops these studies and returns to them no more, except when he teaches them to others. Of course it follows that in the high school or college these lower branches are not reviewed. * * * But the teacher needs precisely this re-examination of all elementary branches. * * * The Normal School therefore took up just this work at the beginning and performed it well. It induced in the young men and women preparing for the work of teaching the habit of taking up the lower branches in their relations to the higher—taking them up constructively, as it were. For to study arithmetic in the light of algebra and geometry is to study it constructively. Its rules are derived from algebraic formulae and are to be demonstrated by algebraic processes. So the details of geography have their explanation in formative processes of land and water as treated in physical geography, and the sciences of which it is a compend. The first learning of a sub-

ject is largely the work of memory. The real knowing begins with reflection upon the data and the discovery of inter relations. The class work and recitations of the Normal School astonish the student at first. He supposes himself to understand the subject, but he discovers there are a thousand phases which he had not thought of. He learns the second lesson with some of these possible side-questions in view. He improves from day to day, and in the course of a year he has acquired a different ideal of the best method of study. He has passed from the text book method to the method of investigation. Formerly he would have held the pupil responsible to learn the words of the book and would not have probed the understanding. Now he goes directly behind the words of the book into the pupil's understanding and teaches him how to think—how to investigate. He is to study the book, but to critically compare one statement with another—penetrate to the construction of the book itself. He is to go out of the book into all his own experience, to verify or refute its statements. He is to go to other stores of information on the subject in this work of verification and critical comparison. When this is done the student finds to his great surprise that the elementary branches stand for the five great branches of human learning in its entirety, and that a proper study of them opens for him all the windows of the soul."

Nothing can take the place of these elementary branches, but they are supplemented in the general curriculum of the Normal School by courses in the philosophy of history, higher mathematics, higher English, Latin, music and drawing, experimental science by the labobratory method, etc. These subjects are valuable, but their chief value, from the Normal School point of view, is the increased mastery they give over "the elementary branches (which) stand for the five great branches of human learning in its entirety."

2. But mind is the subject of education. To develop and train the mind is the real purpose of teaching. To train a faculty or power of the mind it must be exercised upon its

proper subjects and in accordance with the law of its nature. A knowledge of mind—child mind and mature mind—is to the teacher what a knowledge of the body is to the physician. Through the teaching of psychology as a science and by discovering in every subject the nature, processes, laws and products of the human mind the Normal School seeks to give to its pupils a working knowledge of the facts and principles of mental science which the teacher needs in developing the minds of others.

3. The school reveals to its students the way in which the mind thinks a subject. It leads them to see that a rational method of instruction depends upon the nature of the subject studied and the laws of the thinking mind at the various stages of development. It teaches them the principles of method in general and helps them to discover those principles in particular subjects of instruction such as reading, grammar, arithmetic, geography, history, etc. The method of the primary, intermediate and more advanced phases of public school work is made the subject of thorough investigation.

4. The school aims to give to the future teachers of the state's children a correct theory of life, and helps them to determine, in the light of human destiny, the true purpose of education and to see the place of the school among the institutions of society and to appreciate its special function. Literature, general history, the science of education, and the history of educational theories furnish the data for reaching a sound conclusion. The best minds of all time have wrought upon the problem of school education. Systems of education have varied from time to time, according to the theories of life which have prevailed at different epochs. A study of those theories, recorded in the history of education, gives to the future teacher breadth of view, judicial candor and steadiness of purpose. An effort is made to have all the work and discipline of the school conform to a true ideal of life and to show by example how a school may be made the means of developing character by a constant appeal to the highest motives to which the student is

capable of responding and by securing prompt and willing obedience to reasonable requirements.

Correlation of Professional Work.

The school is an organic, self-consistent whole. Each part, by being in accord with the purpose of the school as a whole, is in harmony with every other part, and the student, as he advances, finds all previous work helpful to him in taking the next step. This relation exists between the study of subjects such as geography, arithmetic, history, etc., on the one hand, and of psychology, science of education, method and practice, on the other. The study of elementary subjects is so conducted as to be a preparation for psychology; the general principles of method are derived from the logical method inhering in the nature of the elementary subjects and from psychology; the practice work is based upon the previous work—the study of subjects, of psychology, of the science of education and of special methods which consist in an application of the principles learned in the science of education to the consideration of the teaching of particular subjects, such as arithmetic, reading, language, geography, etc. The same principle which correlates parts of the school regarded as a whole, and gives to it the character of self-consistency, applies with equal force to the facts of each subject. It is not an accident that some facts belong to arithmetic, some to geography, and still others to grammar. Some facts are arithmetical, others historical, etc., in the nature of the case; that is to say, there is some general truth common to all the facts of a given subject which explains the meaning of those facts, unites them into a group by means of a common truth and, at the same time, separates them from the facts of all other subjects in which that truth does not inhere. To see the general truth of a given subject, to see all the particular facts as related to it, and to see the forms in which they address hemselves to sense-perception, to memory, to imagination, to the understanding and to the reason—this scientific and psychological study of the subjects which the graduate of the

Normal school is to use as instruments in educating the children of the public schools, is a very important element in his professional training. But that it may be in the highest sense effective, this study of the elementary subjects must be seen in its relation to other parts of professional training. Having discovered in reading, arithmetic, geography, grammar, history, etc., products of sense-perception, memory, imagination, the understanding and the reason, the student is furnished with a basis for comprehending the laws and conditions of perception, memory, imagination, the understanding and the reason as dealt with in psychology; and having discovered the nature of the branches of study as given above, and having discovered in psychology the law of the learning mind, the student of pedagogy is prepared for the study of the science of education, which considers the adaptation of phases of subject matter to corresponding stages of mental growth—from perception to reason—and the arts and devices which may be employed to stimulate the mind of the learner to appropriate the phase of a subject which he is capable of grasping at a given stage of development. Having learned these general truths, the student is prepared to apply them in detail to the various subjects, such as arithmetic, language, geography, history, etc., and this constitutes special method. Special method shows definitely the order in which the phases of a given subject unfold to the intelligence of a learner from the primary grade up, and also the means to be employed to stimulate him to take the successive steps involved in a mastery of the subject. This phase completes his preparation for giving instruction, and the student is now ready to enter the practice school and acquire skill in the art of teaching. Here he will find it necessary to re-adjust his previously learned theories—he must adapt himself to conditions as they exist; but the more thorough his preparation, the more clearly he perceives the end from the beginning—the more definitely he has thought out the steps by which his class is to go from the position in which he finds them to the goal

proposed—the more energy he will have to meet the unexpected and the more readily can he adapt himself thereto.

Outlines of typical subjects, illustrating the foregoing principles, are given on the pages that follow.

LATIN.

IDA B. MOORE.

Three Years.

Latin is entitled to a place in the curriculum of a Normal School because of the light it throws upon English. The student's conception of English grammar is broadened and deepened by a study of Latin grammar. The more elaborate system of inflection of Latin and the very strangeness of the unfamiliar language compel attention and require observation of thought relations and the ways of expressing them. At almost every step there are opportunities for making instructive comparisons between the two languages. Comparative grammar gives an insight into the construction of many an idiom that would otherwise seem inexplicable. The essence of mood is more clearly grasped with the assistance Latin can give, because it offers, in its different forms for different moods, something more tangible and definite.

The student of Latin appreciates fine distinctions in the use of words to a degree almost if not quite possible to one who knows no Latin.

To any one at all conversant with language studies, our Commissioner of Education, Hon. Wm. T. Harris, will seem to have spoken very fairly as well as very forcibly, when he says that the English language, "though Germanic or Teutonic in its colloquial vocabulary and in its grammatical structure, nevertheless resorts to Latin and Greek for all of its technical words, and for all those words which express fine distinctions of thought or subtle shades of sentiment. * * * The language of the Romans is the language of the political and civil

organization of individuals into institutions, and these constitute our civilization. For the most part, words expressing civil and political relations in all the languages of Europe are Latin." It is apparent that a knowledge of the elements of Latin would be equally beneficial to those who in a life of leisure desire to cultivate an appreciation of literature, and those who take up the burden of citizenship and assume directive power over affairs. Certainly it is important that the teacher, of all persons, should be a master of the language in which is expressed the civilization in which he lives, and that he be able to confer that mastery upon those who are to take their places in it, and take up the duty of carrying it still farther.

Nor is it to be forgotten that the teacher's general culture should not be neglected while he is making special and technical preparation for his work. It is the aim of the work in Latin to awaken in him an appreciation of the language and literature of Rome and to give him a glimpse of her contribution to modern civilization. Endeavor is made to ground the student thoroughly in the elements of Latin and to use so well the time allotted to it that those who desire to continue their work in higher schools may find themselves at the least possible disadvantage.

Latin is begun in the second year of the course. During the year the elements of the language are studied and complete mastery of forms is the predominant aim. At the same time elementary forms of syntax are learned and much attention is given to word formation—roots, prefixes and suffixes. It is believed that with mature pupils better results are obtained by the use of the systematic grammatical method than by the so-called inductive method. The second year of the Latin course is devoted to Caesar and Cicero. Two books of Caesar and two orations of Cicero are read, accompanied by a systematic study of Latin grammar and composition. In the last year of the course six books of Virgil's Aeneid are read and the emphasis is shifted from grammatical structure to literary workmanship.

MATHEMATICS AND PHYSICS.

CLYDE R. TRAVIS.

Arithmetic.

Number is the measure of the ratio of one magnitude to another; and its use is to measure magnitudes, *i. e.,* to express the value of measured magnitudes in terms of unit magnitudes.

Every measurement necessitates three elements—magnitude to measure, unit of measure, and number.

All work in mathematics consists of comparing magnitudes, correctly judging their quantitative relation, and expressing this in intelligible terms.

There is a graduation of quantitative judgments from simple to complex, *e. g.,* inequality (indefinite), equality, number as measuring definite multitude, etc., and the prospective teacher must discover this gradation.

In the early stages of number work there should be constant calls for perception, judging, and verifying; and the work of the learner must be free work. No ready-made judgments should be given him.

The judgment should be made concerning: first, magnitudes present; second, magnitudes absent; third, numbers; and the mind should thus be led to abstract number and see it as relation.

All elements of a comparison should be presented to the mind for consideration.

The material used in illustrating number truths should be simple, free from diverting relations, and such that the number idea of it engages the attention.

Since integers and fractions are one in kind, differing only in degree, the former arising through the synthesis of units and the latter through their analysis and the synthesis of their parts, they should be so presented as to show their identity.

The idea equality is a fundamental idea underlying all work in mathematics, and all complex solutions depend upon the axioms relating to equals; hence the importance of the teacher's appreciation of these axioms.

In number, as in reading, the mind should appropriate an idea and then learn the symbol of it, first the oral symbol then the written; and great care is required lest the child fall to memorizing the names of number sums, difference, products and quotients.

The facts of addition, subtraction, multiplication, and division found in the tables must become as familiar to the child as do the letters of the alphabet.

All applications of number involve the same general problems. The "cases" of percentage are not peculiar to percentage. In every application of numer, "cases," *i. e.,* general problems, are found.

There is a mode of presentation for the applications of number—measurements of areas, volume and capacity, wood measure, interest, commission, etc.—which leads the pupils to see the unity of these topics through seeing the general problems involved in all.

The general truth common to all the facts of arithmetic is the idea of quantitative relation involved in every measurement, and it is in the light of this truth that these facts must be identified.

To be qualified to teach any application of number to pupils, the teacher must know it in actual business, must have run "the fingers of his mind around its edges" in every day life.

The elements involved in an application of number should be so presented that the pupil may see their business relations and can properly relate them.

The demands upon the pupil should be such as to make

of him an investigator and not a reproducer. He should be able to determine possible relations of elements after he sees the elements.

That the student may appreciate the above facts and may have a good knowledge of the subject matter of arithmetic, work is pursued as follows:

1. The nature of a measurement is studied, basing the work on measuring length, area, volume, cost, etc., showing the elements involved, their inter-relation, and their general problems.

2. A study of the solution of the equation revealing the use made of the five axioms,—adding equals to equals, things equal to the same thing, etc.

3. A study of the applications of number by the following series of steps:

(a) Discussion of the topic, say taxes, basing said discussion upon local facts where possible, to lead the pupil to see the elements involved, their inter-relation, the practical problems involved, and the simplest expression of their solution.

(b) Oral solutions of simple examples dictated by teacher and pupils for immediate solution.

(c) Pupils make and solve simple practical examples of these problems.

(d) Examination of elements to discover all possible problems in the topic, and examples of these made and solved by pupils.

(e) Pupils make rules for the solution of examples in the topic.

(f) Solution of examples in the text if they are suitable.

(g) The pupils are led to see the identity of the problems of this topic with the three general problems in measurement.

4. Pupils are required to do considerable work in making practical problems in lumber measure, concerning the circle as involved in machinery, etc.

5. A study of the logical origin of number and the development of number processes, revealing the following:

(a) The ideas involved in each process—counting, addition, etc.

(b) The necessary steps in the presentation of each process that the child may apperceive the ideas readily.

(c) The relation of each process to those preceding it.

(d) The difficulties in the formal work arising from the use of our decinmal system of notation.

(e) The adaptation of the idea to the stage of mental development, *e. g.,* the explanation of, say, division of fractions to a fifth grade pupil, or the explanation of G. C. D. suitable for a fifth grade pupil.

f) The presentation which presents the idea compared with some which do not present it.

Algebra.

Algebra differs from arithmetic in that it deals with number as expressed in general symbols. Here, as in arithmetic, we find two lines of work, viz: statements made and operations performed.

To most students the language and terms of algebra are indeed strange. The work begins with statements, in equations, of simple problems and the solution of these to introduce the meaning of the terms.

No rules are given for work, but rather the pupil is led to see the meaning of the expression, say $x—[24—4x]$, and then to determine what must be done to simplify it. He is led to see that only four operations can be performed upon equals without destroying their equality, and to see that it is only by performing some or all of these that an equation can be solved.

In algebra, as in arithmetic, much oral work is done, especially in solving equations for practice. The aim here and the method are largely as in arithmetic.

The work done covers the matter presented in texts for high schools.

Geometry.

The Geometrician uses axioms and definitions as his earliest major premises and deduces truths, then uses these truths

also as major premises, deducing yet other truths, and thus builds a science of quantity in extension.

Every truth is established by means of deductive reasoning and the language of geometry is that of logic in clearness. Hence the student is carefully led to see the sequence of geometric truths, to use the syllogism, and to distinguish between exact statements and those nearly exact.

Much of the classroom work consists of the development of series of propositions. For example, a figure is represented on the board and truths are stated or written by class. Then some auxiliary construction is added and an additional truth is given with the proof of its truthfulness. By this means a series of several propositions is sometimes deduced and the true meaning of the corollary is seen. Besides, the student learns his own power and becomes independent of the text and freed from its language.

Two terms are spent on plane geometry by all pupils, and one on solid geometry by the students taking the English course.

PHYSICS.

The subject matter of Physics is matter in motion, to ascertain the laws governing the manifestations of physical energy and to learn what use has been and may be made of these laws in man's overcoming his limits.

The laws governing motion can be known only by being studied in phenomena. We may state laws, say, the "Law of Charles," "Archimides' Principle," "Ohm's Law," "Newton's Laws," etc., but these must be verified to have meaning to the student, and the student should do the verifying. It follows from this that the study of Physics must be carried on by means of experiments, using demonstrating apparatus.

The facts of Physics may be classified as facts concerning MASS motions—motions of falling bodies, machines, vibrating strings, air, etc., and MOLECULAR motions—heat, light, electricity, etc.

In studying these facts we begin with a study of those properties of matter necessary to a clear understanding of mass and molecular motions and their governing laws, then study the phenomena in which mass motion inheres, and lastly, those which involve molecular motions.

In the study of any series of phenomena, say those concerning the electric bell, the phenomena are studied, the law stated, explained and verified, and then the applications of the law in industrial life are carefully and extensively, for elementary work, considered. To study these applications advantage is taken of the opportunities to study them in local industries, as electric lighting, telephony, telegraphy, and flour making that the student may have a practical knowledge of Physics.

At every step, the study of Physics involves measurement with some definite purpose in view, hence its value aside from the practical value of the knowledge, is very largely in the mastery it gives the student in accurate measuring, in correctly judging the effect of any known physical force, and in devising methods of eliminating variations in all factors of a problem but one, that the effect of this one factor may be ascertained. *Illustration*—To ascertain the effect of the length of a conductor upon its resistance, we must compare the resistances offered by several wires, differing in length (yet of known length) of equal cross-section, of equal temperature, and of identical material, and must devise some method of doing this by using principles studied.

It is the aim of our work to teach the facts of Physics in their relation to each other and in their application to industrial life, and such theories concerning motion and force as are now held by Physicists.

ENGLISH.

THOMAS HOWARD GROSVENOR.

Grammar.

Every study or science contains a fundamental idea which determines what facts belong to its subject-matter and what do not, and also the relation of each fact to the subject-matter as a whole and to every part of it. That the sentence is an instrument the only use of which is to express a thought, is the fundamental idea in the science of grammar. The subject, therefore, deals with the sentence as determined by the thought expressed. By this idea all the facts of grammar are organized into a science, and the aim of the work is to lead the student to gain a scientific knowledge of the subject, to learn the facts of the subject and to see them in their relations.

The work falls into four main divisions.

In the first division the fundamental unity of all sentences is discovered by working with sentences of various meanings and forms. Their common attributes are determined. The student sees that the only use of the sentence is to express a thought, that every fact of the subject must be viewed in the light of this use and referred to it for its meaning. The thought has three elements, a subject, a predicate, and a relation between the two, and the sentence, which is used to express it, must have three parts, a subject, a predicate, and a copula.

In the second division the work is still with the sentence as a whole. A classification of sentences is made on two bases: first, of their purpose or meaning; and, second, of their form, or the number and rank of the thoughts they express. On the first basis sentences are declarative, interrogative, exclamatory,

and imperative. On the second, they are simple, complex and compound.

In the third division, while the sentence as a whole is kept clearly in view, the work is on its organic parts. A general notion of each of the parts of speech is worked out, and then the subject of modifiers is developed. After this, simple, compound, and complex sentences, respectively, are studied; first, as to the words used in forming them; second, the uses of the words; and third, their modifiers. Under the simple sentence, the phrase is worked out, and under the compound and complex sentences, the clause.

In the fourth division of the work there is a return to the parts of speech. Here they are studied in detail. The work on the noun will serve as an example of what is done with each of them. First, it is divided into its classes: common, proper, class, collective, concrete, abstract, etc. Then its properties, gender, person, number, and case, are worked out.

The method of work may be called the laboratory method, because the student examines the sentence and is led to make his own definitions, classifications, etc., just as he would if he were working with a botanical or a zoological specimen. There is both analysis and synthesis.

The library contains a fine selection of standard texts that are constantly used as references.

Reading.

Reading is the language study the purpose of which is to give a mastery of the printed page as the expression of thought. There are two kinds of reading. They are silent reading and oral reading. The first has for its end the interpretation of the printed page; the second, the adequate expression of the thought, to others, in the words of the author. Obviously good silent reading is the condition of good oral reading.

Aside from the main purpose, reading serves other ends. Through the study of good literature, a taste for it is formed; the aesthetic nature is cultivated; and through the contempla-

tion of noble characters, the reader is stimulated to be like them.

The work in the silent phase of the subject is planned to give the student a better knowledge of the printed page as a symbol of thought, to show him how to overcome its difficulties, and to prepare him to read well orally. To read well orally one must read understandingly. All other reading is mouth reading simply.

The elementary principles of literary classification and analysis are worked out as far as possible inductively from masterpieces of discourse. All discourse is manifestation of mind. It is an appeal to mind. Because of the threefold nature of mind there are three kinds of discourse. These are didactic, emotional and ethical discourse. Because the ideas treated in discourse are particular and general, there are different forms of discourse; description and narration setting forth particular ideas, and exposition and argumentation, general ideas. These forms of discourse are carefully analyzed. Since a great deal of discourse is figurative, the figures of speech are defined and classified.

The aim of the work in oral reading is to remove difficulties which prevent correct oral expression of the thought of the printed page. The topics treated are; the sources of good expression, the elements of good expression, articulation, syllabication, and accent; pronunciation, its standards; consonant and vowel sounds, their classification and analysis; diacritical marks, etc. A part of each day's recitation is the oral reading of selections assigned for classification and analysis.

Rhetoric and Composition.

Rhetoric and Composition are discourse studies, or rather, they are two phases of one study having discourse for its subject-matter. Discourse is the oral or written expression of connected thoughts, and since, in the last analysis, all the themes treated are either particular or general in their nature, its forms may be divided first into two main classes, those that

set forth particular ideas, and those that set forth general ideas. These two main classes may again be divided each into two classes, thus giving the four forms of discourse, the first comprising narration and description, which deal with particular ideas, and the second comprising exposition and argument, which have to do with general ideas.

Narration is the form of discourse that deals with the relating or the telling of a series of connected events as they occur in time. In it the theme is always particular. De Foe's "Robinson Crusoe" is a good example of this form. The aim of the author is to relate the adventures of his hero from the time he left England till he returned.

Description consists in the portrayal of an object by giving its attributes. Its aim is to give a vivid mental picture. Hawthorne's account of the Old Manse is a piece of description because his purpose was to make his reader see the old house and its surroundings just as he saw them.

Exposition, as its name indicates, has for its end the setting forth of a subject as it is organized in thought. It deals with the class and not with the individual, with the general and not with the particular. An article on "The Washington Elm" would necessarily be a description, and there might be narration in it, because the theme is about a particular elm, but one on "The Elm" would be an exposition, because the class, elm, is the theme and not any individual elm. Exposition seeks to explain and to cause the reader or hearer to understand the subject treated.

Argument is like exposition in that its aim is to cause those to whom it is directed to understand its subject, but it goes farther and attempts to win the mover to the same view. It sets forth proofs that go to show the truth or falsity of a proposition.

The speeches of Lincoln and Douglas in their famous debates on the extension of slavery, in which their aims were mainly to win over their hearers to their way of thinking, are good examples of argument.

The field of Rhetoric and Composition is the analysis of discourse in general and of these forms in particular, to determine the underlying principles of construction, and the writing of these forms. Its problem is to adapt the forms of discourse, in harmony with the subjects dealt with and the occasion which calls them forth, to the requirements of the reader or hearer. Rhetoric is the science phase of the subject, and deals with the laws and principles that underlie correct composition. It includes style, which has to do with the manner of expressing thought, and comprises the construction of sentences and their combination to form paragraphs, and the joining of paragraphs to form discourse, and has to do with the mechanical features of the subject. Composition is the art phase of the subject. It consists in putting into practice the principles worked out in the science phase, and is therefore creative. It may be called the inventive phase of the subject, for it has to do with the working out of a line of thought through an outline to its final form as a narrative, a description, an exposition, or an argument.

The work in the two phases of the subject is carried on as far as possible at the same time; that is, while the class is studying the principles, it is also constructing the different forms. The work is always from the general to the particular, from the whole to the part. The composition as a whole is always the unit of the work. After a general notion of what discourse is, is worked out, narration is at once taken up. A masterpiece is read in class and its general and particular attributes are worked out. Then the class begins the writing of narratives. The subjects are chosen for the most part from the student's own experience. The work is therefore original, because it is impossible to use reference books or to paraphrase authors. In the work in exposition and argument, however, as it is impossible to assign subjects where experience can always be drawn upon, there is much work that requires the skillful use of books. The aim is to help the student adequately to express his own thoughts in his own way about experiences

that are, whenever possible, his own; to stimulate interest; to preserve spontaneity; and to avoid writing by rule.

A great deal of written work is required, at least one composition a week, and this is carefully criticized and returned to the student. There are also general criticisms before the class, and consultations with individual students.

From narration the work proceeds to description and then to exposition and argument. The general plan in each is the same as for narration, and as before stated, the emphasis is put upon the composition as a whole, because it is believed that much of the detail will in the end take care of itself. The details, however, are not neglected, for much of the daily recitation work consists of careful study and drill upon them. Among the topics studied are the following: the sentence in itself and in its relation to the paragraph; punctuation, a final review of the work begun in grammar, in which each of the marks is studied in all of its uses; the structure of the paragraph; choice of words, and phraseology, the governing considerations in, and the common mistakes, a detailed study of each of the parts of speech and their combinations; the qualities of style, etc. While there is no attempt to teach the qualities of style, as these depend almost altogether upon the individuality of the student, attention is called to the distinctive qualities in the works of the authors studied in the hope that he will be led to be on the watch for them in his general reading and so be influenced in his own work.

The course in Rhetoric and Composition, because of the intensive study that is done in the masterpieces used to illustrate the forms of discourse, serves as an introduction to the study of English literature.

English Literature.

The work in this subject is planned to give the student, as far as possible in the time allowed, an introduction to the great names in English Literature, and to guide him in the development of his literary taste. It is concentrated upon the

authors themselves, and there is no attempt to give an historcai survey as such. However, each author is studied in the light of the time in which he lived, and in this way a bird's-eye view of the whole field is given.

Among the authors studied are Chaucer, Spenser, Shakespeare, Milton, Swift, Addison, Gray, Goldsmith, Wordsworth, Keats, Scott, Tennyson, and Browning. One or more masterpieces of each is studied. Whenever possible the whole work is read in class, and the aim is always to bring the student into a personal and vital relation to it. As John Burroughs says, "There is only one way to teach literature, only one vital way, and that is by reading it. If the teacher, by his own living voice and an occasional word of comment, can bring out the soul of a work, he may help the student's appreciation of it, he may, in a measure, impart to him his own larger and more intelligent appreciation of it. And that is a true service." Besides the reading of the work in class there are oral and written discussions, special reports and papers. The library contains a fine selection of critical works, and these are made use of freely, but in no case is the work on a classic allowed to become a reading about it and not a reading of it.

In the study of Spenser and Milton, the main characteristics of the epic are worked out; the work in Shakespeare shows the structure of the drama; lyric poetry is illustrated in the works of many of the authors studied; and an introduction to the study of the novel is made in the study of Scott.

Method in English.

The work comprises method in reading, language, and grammar. The central idea in each subject is worked out first, and then, by means of it, the subject matter, its divisions, their relative importance, and the order of their presentation, are determined.

Spelling.

All first year students are required to take at least one term's work in spelling, which consists of daily written work and drills on the fundamental rules of the subject.

HISTORY AND GEOGRAPHY.

JESSE LEWIS.

The history of a people consists of their thoughts, ideas and principles, and is revealed to us by their acts, laws, customs, buildings, creeds, etc. We learn a people's history from a study of the development of their institutions, which embody their ideas, etc. Therefore the growth of institutions is the organizing idea of history. "In proportion as a people organize institutions that realize righteousness and goodness, or what is the same thing, justice and mercy, they achieve civilization." We measure a people's civilization by seeing to what extent all the institutions have been developed and to what degree all the people have an equal opportunity to participate in the various institutions. The mere events and acts of a people constitute the fact phase of their history, while their thoughts, ideas and deeds constitute their real history.

The mastery of the content through a study of the events is the real work of the student of history. The mastery of the content of history is the goal, or end, of all work in this subject, and must be in the mind of the teacher no matter what grade of work he is teaching. The remote end must largely control the immediate. If the end is not seen from the beginning, the work will lack unity and thoroughness. It follows that the teacher of any grade in history must know the content, to intelligently select the proper facts and present them in the proper order.

Organization is essential to real knowledge; it is also necessary to its retention, hence history must be organized. Facts can no more be remembered irrespective of their relation

to what has gone before and what follows, than they can be explained and understood. Organization of history helps to determine what facts should be taught. The first requisite to teach history is a knowledge of the subject. It is necessary in order to give the insight, the interest, and enthusiasm so essential to success.

The Normal School has to deal with both the fact and the reflective phases of history; with the first, because a knowledge of the facts is essential to the understanding of the content, and because many of the important facts of history are unknown to a large number of the students who enter the Normal School. Without a knowledge of the content, the thoughts, ideas, etc., and their relation to each other, the preparation to teach the subject is inadequate. To see a particular movement in the history of a people and see all the particular facts as related to it, is to understand history in its scientific form. This is an essential part of the teacher's preparation.

It is not possible in the time allotted to the study of history to master all the facts, or to comprehend the entire subject, so it is the aim to teach the student how to master history by a careful and systematic study of a part of the subject. An understanding of a part with a knowledge of how to study and a desire to know more of the subject is considered of greater value than a superficial knowledge of all history. To be able to master the content of history, to study it so as to teach it, the student must be in possession of the tools which he uses in dealing with the subject. He must have some maturity, must be in the reflective stage of his development.

"One of the aims in teaching history should be to awaken an interest in the wider experience of all those people whose achievements have become part of our common heritage and without some knowledge of which we can not understand our own civilization." "Where no European history is taught, the pupils will likely remain in dense ignorance of all Europe, and all Europe has meant for American civilization." Since the conditions are such that it seems best in the Normal School to

study American history before taking work in European history, the American colonial history is taught with its European connections, especially its connection with England. Without some knowledge of European history and its relation to our own, the notion of development, which is fundamental to a comprehension of history, will not be fixed.

Results of Historical Study.

The value of the study of history is much greater than is usually given to it. It secures a proper appreciation and a sympathy for the present by a study of the past. It develops in the student a capacity for seeing underlying reasons and for comprehending motives. It trains the student to investigate and search for the truth and gives a basis for future reading, trains in the use of books and teaches the value of a library. The study of history liberalizes the mind, freeing it from prejudices, narrowness, and selfishness. It furnishes ideals and instills patriotism. It puts meaning into the flag and our national songs. It gives training not only in acquiring facts but in arranging and systematizing them. It is especially adapted to give training in judging and reasoning. As an information study it is doubtful if any other school study ranks higher. It is the aim to cultivate in the student a taste for historical reading, and the power and disposition to study the subject systematically.

General History.

The work in General History, in the Latin course, covers three terms. The first and second terms are given to the study of Ancient History, beginning with Egypt and extending to 800 A. D. The third term is given to the study of English history with its European connections. It is the aim to give the students a knowledge of the beginnings of civilization and to trace the development of institutional ideas from the earliest times down to the founding of the United States. The latest and best text books are used, supplemented by daily work in the library. Special topics are assigned for individual investigation.

American History and Government.

One year is given to the study of American history and government. Although but a part of a term is given exclusively to the study of civil government, the growth of union and the ideas embodied in the Constitution are carefully worked out from the beginning of the study of the colonial period. The first and second terms cover the work to Washington's administration, the third term to the close of the Civil War.

The primary object of the first and second terms is to lead the student to see how our present institutions developed, and to see and appreciate the struggle of our forefathers in realizing what we now enjoy. The relation of the geography of the country to the early history; to the struggle between the French and the English, and the war for Independence, is carefully worked out.

In the first term special attention is given to the growth of local government, individual rights, religious liberty, representative government, union, schools, etc. These ideas, so far as time will permit, are traced from their origin in English history.

In the second and third terms the growth of union is traced and the forces that retarded its development are studied. What has been accomplished by our nation in a political, industrial, economic, and social way is the main work of these two terms, the greatest emphasis being given to the political, since through the political the others are realized.

It is the aim to have the students see that while great problems have been solved by our nation in the past, as great, or greater are constantly coming up to be dealt with. Among the other things emphasized are: what facts to include and what to omit, the student being led to see that all facts or events are not of equal value in the study of great movements; the influence of individual men upon our national history, and the relation of events, causes, and results. Causes and results are taught as history as much as campaigns and descriptions of battles, and of greater importance.

Progressive maps are made by each student to show territorial growth, admission of new states and the growth of slave territory. Map work is also emphasized in the first term's work.

The latest and best text books are used, supplemented by a good working library.

ADDITIONAL WORK GIVEN IN THE ENGLISH COURSE.

Political Economy.

One term's work is given to political economy, and includes a study of production, exchange, distribution, and consumption of wealth. Prominence is given to questions of practical importance, such as tariff, taxation, banking, labor and capital, trades unions, etc. The work is introduecd by a short study of the history of political economy and of the Industrial Revolution. The topics are discussed with special reference to American conditions and are illustrated by examples in American experience. The work is elementary and is intended to awaken an interest in the problems of the day and to give a basis for reading and an understanding of the questions now before the nation. The class is put in touch with the topics of the time by reports from the periodicals and newspapers kept on file in the library.

General History.

This term, the fourth in general history, is given to a more careful study of Medieval and Modern history. It includes the growth of the Church, the development of Feudalism, the rise of the Kingdoms of France, Germany, and other European nations, the influence of Mohammedanism, the Crusades, the rise and influence of monastic orders, the Renaissance, the Reformation, the struggle of the nations for supremacy and expansion, the domination of France, the rise of Russia and Prussia, the struggle for Colonial empire, and the French Revolution.

United States History.

A third term in United States history is given in the Eng-

lish course, and includes a study of our history since the Civil War. The work includes the following topics: reconstruction, industrial, economic and social development, political affairs, war with Spain, expansion, growth of the west, etc. The work will be largely library. A review of the entire subject will also be made.

GEOGRAPHY.

(Three Terms.)

Geography deals with those truths which pertain to the earth in relation to man's institutional life, placing immediate emphasis upon business life.

In the language of Guyot, "Geography deals with the earth as the home of man." While the subject matter of geography deals with nature and human nature, it is always faced one way, toward man. The study of geography as a natural science exclusively, is like the play of Hamlet with Hamlet left out. Seasons, winds, rainfall, surface-relief, soil products, and industries are not geographical topics, unless they are studied in their interrelations as they make a home for man, and form a basis for his union in business, the division of labor, and the building and maintaining of society.

Geography as a subject consists in relations; it is the thinking of society in its formative process as based upon nature and nature's laws.

To have a clear concept of these relations implies a constructive knowledge of society and of the essential natural phenomena of the earth. The acquisition of the former is begun in the course in History, and that of the latter occupies the major portion of the time of the classes in Geography during the first two terms.

While the different topics of geography are closely interrelated, they may be regarded as falling into the somewhat artificial divisions of physical and political. This division is made on the basis of the aspect in which the earth is viewed.

From the former stand-point we view the earth as a physical thing, independent of man as a formative factor, except as the re-action of all plant and animal life influences minor details of its character. Sub-division of physical geography is more or less arbitrary and artificial, and made for convenience. For in mathematical geography, so-called, we see the earth as a body in space, as a planet with such definite relations to the sun that we see the phenomena of the seasons, the shifting of the heat-belts, whence we trace the comprehensive system of air currents. Thus we pass from a well defined astronomical phase by insensible degrees to the equally well defined science of meteorology, treating of the weather. Likewise, through the study of the influence of the moon as a cause of tides, we are carried to another equally well defined science—that of oceanography.

Again, we study about deposition of the debris of continents, and of animal remains, on the ocean bottom, and about the uplift above the ocean of these same deposits, and about their exposure to the destructive action of wind, frost, rain—in short, weather—all of which comes under the fairly well marked branch of natural science, physiography. This is often called geographic geology, treating of the earth's surface as a result, in contra-distinction to dynamic geology, treating rather of the forces acting in all time to bring about these present results, and to historical geology, dealing with the succession of the different strata, and the past geography of the time at which each was laid down. But even in physical geography we are compelled to draw heavily on our conceptions of time. The study of the relations of these various phenomena and their explanation constitutes the natural science, strictly speaking, in which man is a very much interested but utterly helpless spectator, when we consider the comparatively slight effect of his reaction on his environment.

The general geography, however, does not stop here. As the student has a clear grasp of each physical fact and geographical unit, he has presented to him the influence exerted

by these on Man, upon him as a physical being and upon his development along institutional lines. The influence of natural conditions upon the larger social development that gives rise to national life brings us to the study of political divisions of the earth's surface.

The investigation of racial and national development, as such, belongs to the domain of history. The study of the present national boundaries of peoples and of their industrial activities is a part of political geography; and the lines of demarkation between this and physical geography is more apparent than real.

In political geography the earth is viewed as the theatre of man's actions and its central truth may be said to be man's use of the earth and its elements. During the first two terms work in geography the student has viewed in their organic relations the essential elements of the natural phenomena which condition industrial life and, through that, all institutional life.

STATEMENT OF CLASS WORK.

The class begins with a detailed study of stream development, not only by the aid of the text, but by field observations on topographic units which reproduce faithfully, on a small scale, all the processes and stages of river development, of even the largest river systems. These field observations are recorded by sketches and reproduced in model. Thus the pupil is introduced at first hand to the action, on ground easy to become familiar with, of that important erosive force which he needs to understand in order to explain the cause of most of the physiographic forms with which he has to deal. His observation work on canyons, flood-plains, terraces, cut-offs, alluvial fans, deltas, cascades, all in miniature, helps to stimulate his imaginative faculties, and to enable him the more easily to form concepts of mountains and such other geographical units as have probably not entered into this experience.

The better to prepare the pupil for this reproduction work, and to understand the diagrams of the texts, he is carried through a simple series of laboratory exercises translating

simple solids into terms of contour lines, contour lines into conventional islands, mountain peaks, etc., modeled in clay or moist sand, making sketches from the models, and making models from the cuts in the text. These exercises being made mostly to scale give the student a proper conception of the exaggeration in the models and relief maps as commonly made.

The vicinity of Mayville offers unique advantages in the study of typical stages of river formation. The best defined of the beaches of ancient Lake Agassiz are but a short distance away, and may be seen from the Normal School. Field excursions form an essential part of the physiographic work. Since this observation work, and the logical development of the subject from it, must be accommodated to the season, it starts at the first of the fall term and occupies the entire quarter. During this time, or following it, attention is given to making relief and contour maps, and to modeling in sand or clay. Common rocks are examined as to their more evident physical properties, and with regard to their importance as soil-forming materials.

The winter term is occupied mostly with the study of the seasons and weather. Simple appliances, such as can be constructed in the district schools, illustrate the place of the earth in the solar system, and demonstrate why the heat belts are located where they are. Demonstrations are made of such simple facts of chemistry and physics as are necessary to understand the constitution and behavior of the air. United States weather maps are freely used and the method of their interpretation taught.

POLITICAL GEOGRAPHY.

The work in physical geography is followed by a term in political geography, in which the aim is to lead the student to see and understand the latter in its relation to the former. The thought side, and not mere memory work, is emphasized.

The relation of man to his physical surroundings, how he is influenced by them, and how he modifies and controls them for his use, is a guiding principle in the study.

The location of cities, centers of population, certain industries, the location of railroads, canals, etc., are studied in relation to their physical conditions. The relation of city and country, the dependence of one section upon others, cause and effect, are some of the ideas made prominent.

The time is too short to make a complete study of the entire subject, hence the different geographical ideas of the United States are studied as types. Important topics are assigned to individual students for special study, and the report given to the class. The study is made intensive rather than extensive.

The knowledge gained of the United States is used as a basis in the study of other countries. Other countries are compared and contrasted with the United States.

NATURAL SCIENCE.

C. H. ROBISON.

The natural sciences may be roughly divided into those dealing with inanimate matter, such as physics, chemistry, and physical geography, and geology, astronomy, etc., and those dealing with living beings.

The study of living things is more specifically called biology. For convenience we speak of botany, or the study of plants, and of zoology, or the study of animals; but the distinction is rather artificial, as we have difficulty in a fine analysis, in formulating the characteristics that mark all the species of either as being separate from all of those of the other. For instance, we usually associate motion with animals, but barnacles and corals do not move after settling down in infancy in a certain place, and the slime molds, known as "sulphur flowers," creep along decaying logs. This latter is a good example of an organism that is claimed alike by botanists and zoologists. While on the other hand, microbes, variously known as germs or bacteria, were for a long time refused admittance into the ranks of either plants or animals, but are now recognized as being degenerate one celled plants. The microscope has revealed to us many plants that are motile during a part of their existence. All are familiar with the movements of clover leaves, tendrils of vines, etc. Other and more sure characters also fail in certain cases. Indeed certain organisms seem to partake of the characters of both plants and animals.

A different alignment of biological study is on the divisions of anatomy, or the study of structure, of physiology, or the study of functions, and of ecology, or the study of the adap-

tations made by the organism to the external conditions. Plants and animals alike may be studied as to their make-up, the structure of their tissues and organs. Likewise they may be studied with reference to the way they act, to the way each organ performs its work, and to the way they adapt or accommodate themselves to their surroundings. Just as most plants have various organs, as roots, leaves, etc., and most animals such oragns as stomach, lungs, etc., so also do plants perform the functions of absorbing water and minerals from the soil, and of manufacturing starch in the leaves, as truly physiological processes as those of digestion and breathing done by animals. The central idea of biology is the study of plants and animals as living things—things on a higher plane than inanimate objects. As living things, they are doing work; as successful living things, they have solved the equation of life, and have succeeded in adapting themselves to varying conditions.

The biological sciences lend themselves especially to the training of observational powers; and for this reason, furnish the favorite material for nature work. Since the material varies so considerably from time to time, and from place to place, a broad foundation in the biological sciences is necessary for successful work in this growing department of primary instruction.

Botany.

In theory plants should be studied in the order of their complexity and, what scientists believe to be the same thing, in the order of their development, beginning with the simplest types of thread-like water plants, and progressing through the mosses and ferns to the seed-plants. In practice, however, this takes the student at the outset into a realm unknown and unrelated to his experiences, and necessitates the use, imediately, of the compound microscope, the technic of which calls for considerable skill. Moreover, experience has shown that better results are obtained, providing the study is pursued during the entire year, if the student begins by observing some of the gross structures of plants already familiar to him, then investi-

gates the adjustments they have made to their environments, and sees how the structures studied are of advantage to the plants in their struggle for existence. Along with this should be studied fundamentl functions. Thus, as the leaf is studied, we note the form, how the leaf of plants in the woodland differs in shape, covering, and other characters from the leaf of prairie plants; we investigate the evaporation of water from the leaf, the contrivances for regulating it; we also study the leaf as a factor, taking in certain gases from the air, water from the soil, and by the power of sunlight manufacturing them into starch, one of the foods of the plant. As the leaf has been studied both by observation and by experiment, so is the root studied, as an organ to anchor the plant, to absorb moisture and minerals, and often to store away food during the winter.

This autumn work is especially valuable in its training for nature work. It calls the student's attention to the many simple but wonderful facts observable while vegetation is alive. It introduces him to the fruitful topics of winter protection, such as bud formation, leaf coloring and leaf fall, and the odd winter habits of many winter herbs. It teaches him the need to the plant of such large underground structures as those possessed by the potato, turnip and others. In short it drills him in that rare art, so useful to a teacher, of keeping his eyes open.

During the pursuit of the work just outlined, is gained a familiarity with the use of ordinary dissecting tools and simple magnifying lenses, and later with the manipulation of the compound microscope. This very useful instrument, by making objects which are too small to be seen by the unaided eye, seem as large as pennies, opens up a new world to the student, and causes him to realize what a wonderful world lies about him. After using delicate instruments, and after receiving a preliminary training in the use of the compound microscope, the student is now ready to study types of the lowest orders of plants, the algae and fugi, such plants as the brook silk, or pond scum, as it is often called, yeast and bread-molds, then to take up the higher mosses and related types.

Preparatory to the work of the spring term, dealing more particularly with spring flowers, there is introduced considerable study of seeds and seedlings, not only as to their appearance as they emerge from the ground but also as to their physiology; as, demonstrations that they need oxygen just as we do; that they give out carbon-dioxide such as we breathe out, and various other experiments shedding light on the seedling's life activities. Closely related to the growth of seedlings is the study of soils. The effect on growth exerted by soils of different natures, by different depths of planting, the origin of soils, and their water-holding power, are some of the questions that arise in this connection.

The spring flowers are studied as types. Those are taken that best illustrate the increasing complexity attained as the plants become more highly specialized. Special pains are taken to show what are the marks of this advancement, and to demonstrate that the several criteria are related and usually accompany one another. Plant analysis is reduced to a minimum, only enough being done to show how it is accomplished. Neither is time spent in pressing and mounting flowers. Such work is wholly mechanical and without educational value. Where an herbarium is made in order to have the plants for reference, the work is of value, and as such, should be encouraged, but when made simply to meet certain time-honored requirements, the time is poorly spent.

Botany.

This subject is pursued during the second year. The time occupied in recitation and in laboratory work is from seven to eight periods per week, averaging two double periods in the laboratory and two single periods for recitations, with one or two periods at the end of the week, according as the time may be spent in recitation or in the laboratory. In the fall and spring, field trips may take the place of laboratory exercises.

Zoology.

Since we may study the functions, or manner of doing

work, of the simple animals as well as of the human body, it is evident that the single term "physiology" is not more applicable to the study of the activities of our own bodies than it is to those of lower animals. It is equally evident, since we must know much of the structure of our bodies, in other words, their anatomy, that the term "physiology" does not cover all that we study. Physiology, therefore, is one branch of zoology, as it is one branch of botany. In studying the human body we investigate both its physiology and its anatomy, as well as the no less important hygiene, treating of its proper care.

The work in zoology, including the study of the human body, forms a continuous year's work in the third year. To draw a sharp line of demarcation of the latter from the rest is no easy task, since the examination of vertebrate structure illustrates human anatomy, and the study of the activities of the protozoa gives us an insight into the workings of the constituent cells of our bodies. It is difficult, also, to separate them in the school year, since many topics not belonging to human physiology obtrude themselves into the time specifically set apart for it, else they must be omitted. By way of illustration, the birds are best observed, if we would make their acquaintance at the time of their migration, or after. The development of the frog, or toad, is most interesting if observed on living material, available only in spring-time. In general, however, the formal study of the lower animals is taken up during the fore part of the year, while human structure and physiology occupies the class the latter part.

The statements made regarding the study of plants in their logical order, apply to that of animals, though the genetic relationship is less apparent, and the difficulties of beginning with the observation of one-celled organisms, owing to their motility, are much greater, unless the students have had previous training in the use of the compound microscope. Where insect life is abundant, there is an advantage in beginning zoology with the study of such forms.

The study of the human body must necessarily be carried on by the aid of manikins, models and the skeleton; but is

logically related to the dissection of the vertebrate animals just previously studied. Under the sub-head of physiology, not only is great attention paid to the functions of the various systems of the body, but also to the subject of foods.

By demonstrations of artificial digestion, much can be shown as to the processes of alimentation. The nutritive values of foods, the constituents that give the values, and the merits of "mixed" and "vegetarian" diets are important topics of dietetics discussed.

Sanitation, not merely of the body, but of the home and land about it, are extremely important and receive the attention due them. Under the sanitation of the body belongs that subject of utmost importance in normal school work, the study of the effects of alcoholics and narcotics.

Many simple demonstrations of a chemical and physical nature are made to illustrate the character of some common elements and such important points as oxidation, the application of the laws of the lever to the muscles and bones, the mechanics of breathing, and points of a similar nature.

Approximately the same disposition of time is made between the recitations and the laboratory work as stated for botany, except that in human physiology the text book largely predominates.

A stereopticon of the latest interchangeable type supplements the microscope and text. It is operated both by electricity and sunlight, and will project images from lantern slides from many of the actual microscopic preparations, and even from living animals of extremely small size.

Neat and accurate records of the observations made, by means of notes and drawings, are essential in all courses.

MUSIC, DRAWING, PHYSICAL CULTURE AND PENMANSHIP.

EDITH E. BRANT.

Music.

It is the object of the work in music study, to enable students to understand thoroughly the elements of music; to read music at sight, to interpret songs with judgment and good expression; and to prepare the student to teach music successfully in the public schools. To this end, two terms of class-work in Theory and Method, as well as daily practice in "voice" and sight-reading in all of the four parts in a general chorus, are required.

In the first term of the class-room study, the basis of work is the major scale, and the working out of a complete chart of scale progressions by each individual student. The drills are presented with the idea of studying, first, the scale as a whole; second, the different tones in relation to any, or all other tones of the scale; third, the minor and chromatic scales in relation to the major scale. Rythm in undivided and evenly divided beats is introduced with the proper accents, and methods and special devices given to make more successful the presentation of this most poorly taught of all the divisions of music study.

A comprehensive set of elementary songs are thoroughly taught in this class. These illustrate each step of progressive study besides providing the prospective teacher with song material for the distinct seasons and "special" days as well as songs for daily use; among them are rote songs for pleasure and wholesome fun or mere beauty, and songs that in addition supplement nature study, physical training, and general lessons aside from their musical value.

In the second term the work of the first term is continued along more advanced lines. Chords and elementarry songs are learned and devices for working out problems in difficult rhythms are given.

Pupils are required in both classes, at times, to take charge of the lesson and develop a subject or give a drill on any point as called for by the instructor.

The voices are carefully exercised and a study of good tones and bad tones with an analysis of the faults producing the latter, and drills for correction is closely followed throughout both terms.

Since music is taking its place in the higher schools of learning, as a branch of mathematics, as well as a healthful moral and physical exercise, to be able to sing a few songs pleasantly is not sufficient preparation for teaching the subject acceptably in the public schools; our course, accordingly, has been made as broad and strong as the time that can be given to it will permit.

Drawing.

Drawing, from the stand point of an educator, is most valuable in cultivating close and accurate observation. The development of this faculty of the mind seems to be almost the opening of a new eye which sees forms, colors and degrees of light and shade never before even dreamed of by the student, and infiintely enlarges his capacity for the enjoyment of the world about him.

Scarcely less important than the faculty of observation are the creative and imaginative faculties. By these all progress in civilization is made. They are the faculties that take the commonplace realities and recombine them into new and beautiful, or practical possibilities. In Drawing, form and surface, through observation, furnish the idea; creative and imaginative design utilize it either for beauty alone or for use.

These creative and imaginative powers lie dormant in every mind. All true art instruction should aim at their awakening, rather than the furnishing of materials for exact repe-

tition. We are striving for this awakening in our students in a way that we trust they will be influenced to go out and strive likewise for the awakening in their own schools.

Four terms of recitation room work, without outside preparation of lessons, are required in Drawing.

Form, Direction of Lines, Light and Shade and Texture of Surface, form the basis of every lesson. Elementary work in water color and Indian ink is given, as well as the regular pencil charcoal sketching.

In the first term, simple type-forms, both plain and solid, are studied, with immediate application of principles learned, in sketches of common objects. Simple landscape, flower forms and surface treatment are brought into notice; and planning as to place on paper, size and correct proportions, is a part of every exercise. In color, plain and graded washes are practiced upon, and "flat" color applied to decorative design.

In the second term, the plan of the first term's work is continued in a more advanced form. Grouping of objects and the choosing of a pleasing view point is discussed and practiced by the pupils. Landscape from nature is practiced often as possible, and from photographs where nature is impracticable.

The third term continues the work of the second term, having in addition the study of the human figure-type and from pose, and casts; also perspective principles.

The fourth term continues perspective and advanced practice along all other lines previously named, and makes a specialty of color in plant life, flowers and landscape.

Throughout the course, systematic critic lessons give pupils opportunity to observe the work of other members of the class—discuss different devices for arriving at like results, etc. These lessons are among the most valuable in fitting for the after work of teaching.

Physical Training.

The class work in Physical Culture, compulsory upon all first-year students, gives thorough drill in correct standing and sitting positions, both active and resting; also rising and being

seated without awkwardness; marching and walking correctly. Individuals are tested, faults and weaknesses noted and corrective and strengthening work suggested.

Following this, come sets of rhythmical gymnastics, systematically graded for Primary, Intermediate and Grammar grade use, beginning with light, simple, single, arm, foot, leg or trunk movements and developing into strong co-ordinated exercises bringing into simultaneous use every muscle of the body.

Method of presentation, school hygiene and faults in school furnishings are discussed, and students at times, take charge of the class for practice in directing lessons.

In view of the demands of the present strenuous life, upon the general vitality of the people of the North and Central portions of our country, and the appalling prevalence of lung diseases, very especial attention is given to breathing, enlargement of lung capacity, and exercises acting directly upon the vital organs and the circulation.

The course as a whole is primarily designed to give to the Normal student, himself, ease of movement and well-balanced poise, and a strong vitality, and through him, to bring about better physical conditions in the schools in which he will teach.

Penmanship—Two Terms.

The value of good penmanship is emphasized. Movement and form receive equal attention. Good form is essential to legibility without which writing is of no use; good movement, that is the ability to write with a fair degree of speed, is of equal importance.

The muscular, or forearm movement, is taught and the vertical form. If the two are combined in all practice there is no reason why the student may not learn to write well in a comparatively short time.

ART OF PRIMARY INSTRUCTION.

LAKE G. WATSON.

In all the courses in special method an effort is made to present the subject in its two fold relation, its relation to the child and its relation to life.

Child study has revealed the fact, that, within broad general lines, each stage of child development is characterized by some predominating activity, and is accompanied by the appearance of certain instincts and impulses. These native instincts and impulses determine not only the phase of a subject which should be presented at a given time, but also its mode of treatment. To show the real significance of the subject, however, it must also be presented in its relation to life. Facts have little value unless they interpret to the individual the life which he sees about him, and a knowledge of processes is meaningless except as these are conceived as instruments of social intercourse.

In this endeavor to present the various school subjects in their relation to the whole of which they represent particular aspects, that is, their relation to human experiences, the unity and continuity of the experience of the child will also be conserved.

Again, in all work in method, there is an attempt to establish a more normal relation between information and volition, between learning and doing, than commonly prevails in the work of the elementary school. The relation between thought and action as it exists in the practical affairs of life is taken as the standard, so far as school conditions will admit. In order to secure this balance between the intellectual and voli-

tional phases of the work the need of motive, of a purpose that is intelligible to the child, that attracts him, and that will call forth the interest requisite to meet and overcome the difficulties involved in the atttainment of the end sought, is recognized. To this end, also, the importance of abundant opportunity for and varied means of self expression is urged.

The cultivation of the social instincts is also emphasized and each course in special method includes suggestions as to means for making the subjet contribute to the social organization of the school.

Method in English.

This course comprises method in reading, language, both spoken and written, and grammar. In each a distinction is made between the form and content aspects of the subject, particular emphasis being placed upon the latter.

Reading.—In reading the first step is to arouse a desire to read, a conscious need of this means of sharing the thought and experience of others along lines of common interest. The study of the development of speech reveals the psychological principles upon which it is based, and its relation to the mastery of written language.

While the main emphasis is placed upon thought, due consideration is given to the most effective and economical means of overcoming the mechanical difficulties in connection with learning to read and different methods are examined and criticized from the standpoint of the educational principles involved.

The selection and treatment of material for reading lessons and the development of literary taste are also discussed.

Language.—Language as a means of communication of thought presupposes thought as its base. This relation between content and form should characterize all work in language throughout the elementary school course. Spoken language is considered in its relation to written language, and the importance and means of establishing correct forms in both are emphasized.

Grammar.—Grammar involves an examination into the

structure of language, as determined by the thought to be expressed. The insight gained by such a critical study establishes a standard of judgment by which written and spoken language may be measured.

Method in Arithmetic.

Since the number idea has its origin in measurement, the initial steps in the study of arithmetic should deal with magnitude. The child should first be made to feel the need of measure as a means of the attainment of an end suggested by some other phase of the school experience. Throughout the elementary school course this practical relation between number and measure should be kept prominent.

From vague and indefinite ideas of relative magnitude definite ideas are acquired through the exact comparison of magnitudes. These relations are expressed by means of symbols, which should be presented only after the idea has been well established. While skill and accuracy in the use of symbols are essential they should not be secured at the expense of the idea representd by the symbol.

The various applications of number in business should be presented in their relation to the social organization which gave rise to them, and should become the means of interpreting this to the child.

Method in History.

The purpose of history in the elementary school should be to afford a clearer insight into present conditions through a study of the record of the past.

A knowledge of the local environment, including social, industrial and civil relations, followed by the broader view gained through a study of the typical occupations of society, acquaintance with primitive life as representative of the simplest form of social organization, the relation of discoveries and inventions to human progress, and the study of epochs illustrative of particular ideas, are some of the steps by means of which this insight may be gained.

Method in Geography.

Geography is the study of the earth in its relation to man. The course in method seeks to realize this definition in the consciousness of the child. Beginning with the geography of the home environment, the child is next led to a knowledge of the more remote parts of the world, and an appreciation of social interrelations. Commercial and political geography, as being the most concrete expression of human interdependence determined by geographical conditions, are followed by physical and mathematical geography.

CATALOGUE OF ALUMNI.

FIRST GRADUATING CLASS, '95—15.

Boyum, E. E.	Jennings,	La.
Brumwell, Milton	Hatton,	N. D.
Butler, W. H.	Sherbrooke,	N. D.
Courtney, W. J.	Page,	N. D.
Dallas, David	Wilbur,	Wash.
Frazier, L. J.	Hoople,	N. D.
Morrish, W. J.	Page,	N. D.
Putnam, Grace B.	New Rockford,	N. D.
Allen (Saunders), Ida B.	Missoula,	Montana.
Sinclair, J. H.	Cooperstown,	N. D.
Smith, R. L.	Grand Forks,	N. D.
Sonderall, J. B.	Velva,	N. D.
Springen, Sophia H.	Mayville,	N. D.
Warren, E. G.	Brisbane,	N. D.
Williams, Louis	Davenport,	Iowa.

SECOND GRADUATING CLASS, '96—13.

Boyum, George	Jennings,	La.
Brown, W. G.		Germany.
Belanger, Katrine	Mayville,	N. D.
Kaldor, Theo.	Hillsboro,	N. D.
Koppang, Sophia	Portland,	N. D.
Anderson (Larson), Louise	Mayville,	N. D.
Moen, Ida	Mayville,	N. D.
Mooers, W. G.	Devils Lake,	N. D.
McDonald, N. C.	Lidgerwood,	N. D.
Patterson, Henry	Hoople,	N. D.
Sunderland, T. S.	Grafton,	N. D.
Brown (Thams), Fredrica		Germany.
Wambheim, Mary	Mayville,	N. D.

THIRD GRADUATING CLASS, '97—7.

Carlile, A. M.	Grandin,	N. D.
Hasselquist, Thomas A.	Sherbrooke,	N. D.
Keene (Josh), Minnie S.	Hope,	N. D.
Keene, Edward O.	Hope,	N. D.
Sinclair, Edith R.	Hannaford,	N. D.
Thornton, Edgar		
Mooers (Walton), Libbie C.	Devils Lake,	N. D.

FOURTH GRADUATING CLASS, '98—3.

Fecher, Gilbert O.	Mayville,	N. D.
Lucken, Emma F.	Mayville,	N. D.
Walbom, Anna A.	Fergus Falls,	Minn.

FIFTH GRADUATING CLASS, '99—13.

Anderson, Sophia	Fargo,	N. D.
Blackorby, Charles E.	Cando,	N. D.
Bolstad, Andrew L.	Ashley,	N. D.
Carhart, Edith Beebe	Mayville,	N. D.
Colvin, Robert	Cando,	N. D.
Hillier, Geo. H.	Milton,	N. D.
Halland, Hannah Alice	Fargo,	N. D.
Johnson, Kittie May	Pembina,	N. D.
Curry (Long), Adelaide S.	Finley,	N. D.
Moskau, Gilbert	University,	Minn.
Porter, W. H.	Olga,	N. D.
Rosholt, Ruth	University,	Minn.
Sletto, Anna	Cando,	N. D.

SIXTH GRADUATING CLASS, '00—20.

Burdick, Usher L.	Northfield,	N. D.
Burdick (Robertson), Emma	Northfield,	N. D.
Berrington, Blanche Frances	Northwood,	N. D.
Cooper, Margeret	Mayville,	N. D.
Cruden, Nellie	Dickinson,	N. D.
Cassidy, James H.	Leeds,	N. D.
Deitz, Helen M.	Hood River,	Wash.
Hibbard, Mabel E.	Berkeley,	Cal.
Keene, Rena E.	Hope,	N. D.
McCarten, Margaret	Fargo,	N. D.
McCarten, Tene	Cogswell,	N. D.
McCarten, Cinda	Cando,	N. D.
Morrish, Ada Maud	Lidgerwood,	N. D.
Miller, Albert G.	Sherbrooke,	N. D.
Nestos, R. A.	University,	N. D.
Sinclair, Sadie J.	Minneapolis,	Minn.
Skrivseth, Bendick O.	Madison,	Wis.
Watkins, Augusta A.	Manganola,	Col.
Wilkins, Coral	Fargo,	N. D.
Poulson (Wold), Inga	Valley City,	N. D.

SEVENTH GRADUATING CLASS, '01—15.

Swartwood (Adams), Eva M.	Grandin,	N. D.
Anderson, Annie Frances	Finley,	N. D.
Dolve, Nels O.	Portland,	N. D.

Erickson, Mathias B.	Hillsboro,	N. D.
Halldorson, Halldor	Souris,	N. D.
Hendrickson, Lillie	Auburn,	N. D.
Hiller, Will A.	Hoople,	N. D.
Jones, Charlotte	St. Thomas,	N. D.
Kaldor, Ole O.	Hillsboro,	N. D.
King, Sylvia L.	Fargo,	N. D.
Morrill, Jessie	Palmer,	Mich.
McCarten, Emmett	Fargo,	N. D.
Vinje, Eivin	Conway,	N. D.
Ackerman (Willis), Bessie	Deschutes,	Ore.
Whittemore (Lynn), Blanche G.	White Earth,	N. D.

EIGHTH GRADUATING CLASS, '02—22.

Aspinwall, Mabel	Wahpeton,	N. D.
Parsons (Burd), Daisie	Edinburg,	N. D.
Larin (Carhart), Margaret	Mayville,	N. D.
Clunis, Viola	Hoople,	N. D.
Crothers, A. R. E.	Buxton,	N. D.
Deitz, Effie	Kempton,	N. D.
DeNoyer, John	Graham's Island,	N. D.
Erickson, Edward	Dundee,	N. D.
Ferguson, Lela E.	Fargo,	N. D.
Fingerson, Emily	Larimore,	N. D.
Hocking, William	Absaraka,	N. D.
Koppang, Olga	Portland,	N. D.
Kuhn, Elizabeth	Edinburg,	N. D.
Morrish Carrie	Mayville,	N. D.
Parsons, W. Earl	Edinburg,	N. D.
Peterson, Eli E.	Leeds,	N. D.
Poulsson, Eleonar	Mayville,	N. D.
Roberts, Ruth	Devils Lake,	N. D.
Shear, Maure B.	Buxton,	N. D.
Sando, Anna	Portland,	N. D.
Skarperud, Andrine L.	Portland,	N. D.
Voge, Ole O.	Dundee,	N. D.

NINTH GRADUATING CLASS, '03—21.

Anderson, Josephyne	Hendrum,	Minn.
Anderson, Rena	Thompson,	N. D.
Champine, Inez E.	Fargo,	N. D.
Chantland, Ellen J.	Park River,	N. D.
Deane, C. H.	Cayuga,	N. Y.
Dawson, Jessie	Cando,	N. D.
Forre, Anne E.	Mayville,	N. D.
Jobe, Elizabeth	Milton,	N. D.
Koerner, Lottie F.	Langdon,	N. D.

Lerom, Bertha	Madison,	Wis.
Lerom, Hattie	Madison,	Wis.
Lerom, Marie	Lidgerwood,	N. D.
Lynner, Hilda	Mayville,	N. D.
Mitchell, Jessie	Cando,	N. D.
Palmer, Bertha R.	Larimore,	N. D.
Raaen, Aagot	Hatton,	N. D.
Sando, Olga M.	Portland,	N. D.
Shortridge, Lila V.	Devils Lake,	N. D.
Sorensen, Mamie	Lidgerwood,	N. D.
Thomson, Tilda	Kelso,	N. D.
Vannier, E. Laurena	Larimore,	N. D.
Wilbur, Ruth A.	Cumings,	N. D.

CATALOGUE OF STUDENTS.

The following list does not contain the names of pupils in the practice department, or Model School. It includes only those who are taking the teachers' course in the Normal School.

POST GRADUATES—20

Aspinwall, Mabel	Class of '02.
Berrington, Blanche	Class of '00.
Clunis, Viola	Class of '02.
Colvin, Robert	Class of '99.
Fecher, G. O.	Class of '98.
Forre, Anna E.	Class of '03.
Hankey, Kathryne	Indiana, Pa.
Koerner, Lottie	Class of '03.
Koppang, Olga	Class of '02.
Koppang, Sophia	Class of '96.
Kuhn, Elizabeth	Class of '02.
Lynner, Hilda	Class of '03.
Morrish, Ada M.	Class of '00.
Morrish, Carrie	Class of '02.
Palmer, Bertha R.	Class of '03.
Sando, Anna	Class of '02.
Shear, Maude B.	Class of '02.
Skarperud, Andrine L.	Class of '02.
Vinje, Eivin	Class of '01.
Voge, Ole	Class of '01.

UNDER-GRADUATES.

Seniors 1904—29.

Abel, Melvina G.	Tomey,	N. D.
Bagnall, Herbert	Hazelgrove,	P. E. I.
Best, Herbert H.	Crapaud,	P. E. I.
Burbidge, Anna J.	Park River,	N. D.
Chase, Mary B.	Reynolds,	N. D.
Charlton, Ethel G.	Skyberg,	Minn.
Cliffgard, Theo J.	Mandt,	N. D.
Crafer, Thomas, LL. B.	Princetown,	P. E. I.
Denning, Lillie M.	Oakes,	N. D.
Erickson, Oscar	Edinburg,	N. D.
Fiske, Etta G.	Hunter,	N. D.
Fraser, Anna M.	Knox,	N. D.
Hazzard, Olive E.	Cashel,	N. D.

Haywood, Margaret, B. S.	West LaFayette,	Ind.
Hegland, Clara	Grafton,	N. D.
Hill, Minnie	Fergus Falls,	Minn.
Keeping, Kimball	Murry Harbor South,	P. E. I.
Lucken, Lillie M.	Mayville,	N. D.
MacLeod, John	Valley Field,	P. E. I.
McElfresh, Elinor R.	Mayville,	N. D.
McLean, Anna	Penn,	N. D.
McMordie, Margaret N.	Mayville,	N. D.
Morrish, Minnie Violet	Mayville,	N. D.
Nelson, Anna S.	Baconville,	N. D.
Scott, Georgie, A. B.	Elmsdale,	Nova Scotia
Shortley, Ethel A.	Hunter,	N. D.
Smith, Robert E.	Charlottetown,	P. E. I.
Trowsdale, Artemas	Crapaud,	P. E. I.
Wold, Jennie	Kindred,	N. D.

First, Second and Third Year Students, 327.

Aasheim, E. T.	Souris,	N. D.
Aasen, Emma	Clifford,	N. D.
Alstad, Clara	Perth,	N. D.
Ames, Cora	Mayville,	N. D.
Amsdell, Hettie T.	Hope,	N. D.
Anderson, Albert	Walcott,	N. D.
Anderson, Alma	Portland,	N. D.
Anderson, Cora T.	Grafton,	N. D.
Anderson, Cora M.	Mayville,	N. D.
Anderson, Hilda	Pelican Rapids,	Minn.
Anderson, Ida	Portland,	N. D.
Anderson, Josephine	Portland,	N. D.
Anderson, John	Portland,	N. D.
Anderson, Julia	Hatton,	N. D.
Anderson, Loretta	Portland,	N. D.
Anderson, Minnie	Mayville,	N. D.
Anderson, Matilda	Portland,	N. D.
Anderson, Tildie	Walcott,	N. D.
Andrus, Hettie	Grover,	N. D.
Ayrea, Mattie	Cooperstown,	N. D.
Bakken, Ellen	Hatton,	N. D.
Baird, Mae	Lakota,	N. D.
Bartik, M. W.	Lidgerwood,	N. D.
Barrows, Gladys	Wahpeton,	N. D.
Bauer, Bertha	Wahpeton,	N. D.
Bernston, Amanda	Milton,	N. D.
Berrington, Agnes	Mayville.	N. D.
Bennett, Anna	Jerry,	Ohio
Berwick, Clara E.	McVille,	N. D.

Bingham, Daisy	Caledonia,	N. D.
Bishop, May L.	Davenport,	N. D.
Bjelde, Josie	Mayville,	N. D.
Bjertness, Olaf	Hatton,	N. D.
Bjorhi, Regine	Bue,	N. D.
Blackorby, Mae	Cando,	N. D.
Bland, Kate	Lakota,	N. D.
Blakely, Thomas	Hope,	N. D.
Bovill, George C.	Wahpeton,	N. D.
Bonnell, Kittie	Blanchard,	N. D.
Braaten, Iren I.	Kindred,	N. D.
Breslain, Mary	Lakota,	N. D.
Brown, Josephine	Antwerp,	N. D.
Burdick, Maud A.	Oberon,	N. D.
Burke, Mabel	Hillsboro,	N. D.
Butterfield, Effie N.	Caledonia,	N. D.
Burr, C. C.	Lakota,	N. D.
Bryce, Earl G.	Vandalia,	Ind.
Bye, Helen	Hatton,	N. D.
Campbell, Elsie V.	Wyndmere,	N. D.
Carhart, Agnes	Mayville,	N. D.
Carhart, Ruth	Mayville,	N. D.
Carlson, Anna	Dwight,	N. D.
Carlson, Christina	Dwight,	N. D.
Carter, Nina	Mantador,	N. D.
Chezik, Anastasia B.	Wahpeton,	N. D.
Chisholm, Margarete	Devils Lake,	N. D.
Clark, Cora B.	Lidgerwood,	N. D.
Clark, Edna	Portland,	N. D.
Clark Elizabeth	Lidgerwood,	N. D.
Clary, Margaret	Cando,	N. D.
Clere, Chrisite	Buxton,	N. D.
Cochrane, Mary J.	Grandin,	N. D.
Cochrane, Lizzie	York,	N. D.
Comstock, Agnes	Graham's Island,	N. D.
Cooley, Clarice	Hope,	N. D.
Cooley, Kathleen	Hope,	N. D.
Cooper, Clara	Mayville,	N. D.
Colman, Emma C.	Leonard,	N. D.
Conway, Belle	St. Paul,	Minn.
Corrigan, Mary	Lakota,	N. D.
Cowden, Marie	Mayville,	N. D.
Crossman, Lillian	Cando,	N. D.
Cunningham, Ethel	Armourdale,	N. D.
Currie, Anna	Starkweather,	N. D.
Dakken, Lena	Kindred,	N. D.
Darch, Cora	Sherbrooke,	N. D.
Davis, C. P.	Balton,	N. D.

Davis, Olive	Sidney,	N. D.
DeArton, Irene	Maza,	N. D.
DeArton, May	Maza,	N. D.
Denning, W. W.	Ellendale,	N. D.
Disher, John M.	Etna,	N. D.
Dolve, O. H.	Portland,	N. D.
Dotson, Delbert	Mayville,	N. D.
Dutcher, Essie M.	Hillsboro,	N. D.
Dutton, Millie	Hunter,	N. D.
Ellertson, Hannah	Niagara,	N. D.
Ellingson, Emma	Hunter,	N. D.
Ellis, Herbert D.	Milroy,	N. D.
Enochs, Elida	Abercrombie,	N. D.
Erickson, Clara	Mayville,	N. D.
Erstad, Alfred	Hatton,	N. D.
Evanson, Olga	Portland,	N. D.
Evingson, Minnie	Kindred,	N. D.
Facey, Jennie E.	Aneta,	N. D.
Farmer, Neva	Mayville,	N. D.
Fedje, Millie	Hoople,	N. D.
Fladeland, Fay	Portland,	N. D.
Fladeland, May	Portland,	N. D.
Flaten, Marion	Park River,	N. D.
Flynn, Emma J.	Cando,	N. D.
Foley, Anna	Bartlett,	N. D.
Forbes, Francis	Dwight,	N. D.
Ford, Ester	Wyndmere,	N. D.
Forthim, Nellie	Cummings,	N. D.
Fuglaas, Anna	Aneta,	N. D.
Gilbertson, Laura	Clifford,	N. D.
Gilbertson, Nellie	Portland,	N. D.
Goodall, Maude	Erie,	N. D.
Gorman, Mary G.	Larimore,	N. D.
Grant, Marguerite M.	Lakota,	N. D.
Grinde, Anna	Portland,	N. D.
Grimstvedt, Helga	Blanchard,	N. D.
Grimstvedt, Emma	Blanchard,	N. D.
Gudehue, Emma	Brookings,	S. D.
Hagen, Belle	Cooperstown,	N. D.
Hanes, T. W.	Cando,	N. D.
Hansen, Martha	Mooreton,	N. D.
Hanson, Carrie	Mayville,	N. D.
Hanson, Ella M.	Mayville,	N. D.
Harris, Albert	Kindred,	N. D.
Harron, Ruth	Colfax,	N. D.
Hasselquist, Mrs.	Sherbrooke,	N. D.
Hegeland, E. T.	Silvista,	N. D.
Heglie, Randie	Walcott,	N. D.

Helling, Alma	Walcott,	N. D.
Helling, Alfred	Walcott,	N. D.
Helling, Eminda	Walcott,	N. D.
Hendrickson, Anna	Clifford,	N. D.
Henninger, Carl G.	Sherbroke,	N. D.
Hepburn, Margaret	Blanchard,	N. D.
Herbrandson, Nina	Caledonia,	N. D.
Hocking, Harry	Absaraka,	N. D.
Holbrook, Birdie	Rugby,	N. D.
Holbrook, Bessie L.	Rugby,	N. D.
Himes, Blanche	Bisbee,	N. D.
Hoose, Mae E.	Caledonia,	N. D.
Houser, Maude	Paulding,	Ohio.
Hughes, May	Clifford,	N. D.
Huset, Louis	Hatton,	N. D.
Hunt, Florence A.	Rocklake,	N. D.
Hunter, Carrie	Portland,	N. D.
Hunsley, Edythe A.	Williston,	N. D.
Jacques, Byrtha	Wyndmere,	N. D.
Jenkins, Minnie	Erie,	N. D.
Jenkins, Sarah	Erie,	N. D.
Jenkins, Susie	Erie,	N. D.
Jereczek, Rose	Lidgerwood,	N. D.
Johnson, Bertha	Laota,	N. D.
Johnson, Andrew	Hatton,	N. D.
Johnson, Carl	Hatton,	N. D.
Johnson, Clara	Hillsobro,	N. D.
Johnson, Eina	Hatton,	N. D.
Johnson, Emily	Ottofy,	N. D.
Johnson, Ella	Buxton,	N. D.
Johnson, Helga	Mayville,	N. D.
Johnson, Ida J.	Clifford,	N. D.
Johnson, Nellie S.	Hillsboro,	N. D.
Johnson, Jennie	Caledonia,	N. D.
Kelly, May A.	Mayville,	N. D.
Kelley, Maude E.	Adler,	N. D.
Kemp, Mrs. Faber	Galesburg,	N. D.
Kenney, Pearl	Mayville,	N. D.
Kesler, Emma	Zion,	N. D.
Kimball, Minor	Lakota,	N. D.
King, Annetta M.	Fairmount,	N. D.
Kjelsberg, Christina	Mayville,	N. D.
Kimball, Nellie	Cando,	N. D.
Kramer, Ethel O.	Wahpeton,	N. D.
Kruse, Anna	Mayville,	N. D.
Kulstad, Mary	Halstad,	Minn.
Lee, Marion	Lakota,	N. D.

Lees, Frances Ophelia	Cayuga,	N. D.
Leslie, Edna	Mayville,	N. D.
Levin, Aaron	Park River,	N. D.
Lium, Lena	Christine,	N. D.
Long, Eliza	Cando,	N. D.
Luckey, Effiie D.	Lakota,	N. D.
Luke, Leta	Bisbee,	N. D.
Lynner, Alice M.	Sharon,	N. D.
Lukanitsch, John	St. Cloud,	Minn.
Lund, Pauline	Portland,	N. D.
Machinn, Ethel	Page,	N. D.
Marquardt, Clara	Hatton,	N. D.
Mattson, Sara	Blanchard,	N. D.
McArthur, Florence	Lakota,	N. D.
McComb, Clara A.	Blanchard,	N. D.
McCrae, Maude	Adler,	N. D.
McCradie, Jennie	Hendrum,	Minn.
McInnis, Olive C.	Kelso,	N. D.
McLarty, Maggie	Cando,	N. D.
McLarty, Ila	Starkweather,	N. D.
McLean, Dan A.	Lakota,	N. D.
McMachen,M. G.	Cando,	N. D.
McNew, Sylvia	Lakota,	N. D.
McVey, Jessie	Sidney,	N. D.
Meade, Myrtle	Cando,	N. D.
Melhus, Nettie	Mayville,	N. D.
Miller, Maude M.	Zion,	N. D.
Miller, Emma P.	Cando,	N. D.
Moe, Elmer	Hatton,	N. D.
Molden, Gena	Fergus Falls,	Minn.
Molden, Anna C.	Mayville,	N. D.
Mollins, John H.	Caledonia,	N. D.
Moore, Maude	Ellison,	N. D.
Morrison, Rose A.	Niagara,	N. D.
Muchvitch, Anna	Wahpeton,	N. D.
Murdick, Villia	Cando,	N. D.
Mulvey, C.	Finley,	N. D.
Nash, Mildred	Sherbrooke,	N. D.
Nelson, Anna L. A.	Petersburg,	N. D.
Nelson, Clara	Petersburg,	N. D.
Nelson, Clara	Hatton,	N. D.
Nelson, Elizabeth	Kindred,	N. D.
Nelson, Elmer	Hatton,	N. D.
Nelson, Eva	Portland,	N. D.
Nelson, Minnie	Erie,	N. D.
Neimeier, Mabel	Buxton,	N. D.
Ness, Bertha	Mayville,	N. D.
Ness, Marie	Wahpeton,	N. D.

Nicholson, Christie	Grand Forks,	N. D.
O'Brien, June K.	Blanchard,	N. D.
O'Brien, Stella	Harrisburg,	N. D.
O'Brien, Amelia	Blanchard,	N. D.
O'Hara, Gertrude	Park River,	N. D.
O'Keefe, Elizabeth	Buxton,	N. D.
Olsgard, Charlotte	Bue,	N. D.
Olson, Alida	Milton,	N. D.
Olson, Clara E.	Fergus Falls,	Minn.
Olson, Dagny	Portland,	N. D.
Olson, Inga A.	Mayville,	N. D.
Olson, Solverg	Mayville,	N. D.
Otteson, Tina	Christine,	N. D.
Paddock, Lulu M.	Pembina,	N. D.
Page, Mae	Lakota,	N. D.
Parrott, M. E.	Ellison,	N. D.
Patterson, Ada H.	Portland,	N. D.
Paulsrud, Randa	Michigan,	N. D.
Pendergast, Isabelle	Ray,	N. D.
Peterson, Gertie P.	Sharon,	N. D.
Place, Della	Devils Lake,	N. D.
Plummer, Maude E.	Grand Forks,	N. D.
Picard, Thea	Esmond,	N. D.
Porter, Mrs. Helen	Amenia,,	N. D.
Powers, Ruth	Lynchburg,	N. D.
Quick, Carrie	Perth,	N. D.
Raferty, W. L.	Adler,	N. D.
Rapp, Mabel	Oakes,	N. D.
Reep, Laurie C.	Adler,	N. D.
Reyerson, Anna	Mayville,	N. D.
Reynolds, Josephine	Leeds,	N. D.
Richardson, Norma	Hope,	N. D.
Rodger, Walter J.	Mayville,	N. D.
Ronning, Hulda	Souris,	N. D.
Rose, Phoebe	Mayville,	N. D.
Rosenquist, Matilda	Joy,	Minn.
Rover, Lettie	Halsted,	Minn.
Rulifson, Beth	Saginaw,	N. D.
Rulifson, Alta E.	Rocklake,	N. D.
Sanford, Maggie	Sarnia,	N. D.
Schneiberger, Minnie	Fairmount,	N. D.
Seiwert, Anna	Lynchburg,	N. D.
Severson, Carl	Norton,	N. D.
Sheridan, Lizzie	Hillsboro,	N. D.
Sheets, Anna	Kempton,	N. D.
Sheridan, Kate E.	Hillsboro,	N. D.
Shireman, Edith	Rosedale,	N. D.
Skanger, Josephine	Christine,	N. D.

Skarperud, Mary	Mayville,	N. D.
Solberg, Hannah	McIntosh,	N. D.
Sonderall, Gertie	Hatton,	N. D.
Sondreall, Helen	Hatton,	N. D.
Sparrow, Margaret	Portland,	N. D.
Spink, Paul E.	Wahpeton,	N. D
Spink, Mrs. Paul E.	Wahpeton,	N. D.
Stansberry, Ethel	Finley,	N. D.
Steen, Stella	York,	N. D.
Stenehjem, Martin	Mayville,	N. D.
Stevenson, Della M.	Sidney,	N. D.
Strand, C. O.	Dissmore,	N. D.
Sullings, Maud	Cummings,	N. D.
Swalstad, Clara	Caledonia,	N. D.
Swenson, Sophia	Aneta,	N. D.
Swihart, Bertha R.	Mayville,	N. D.
Stears, James M.	Lidgerwood,	N. D.
Taplin, Jennie E.	Blabon,	N. D.
Taves, George	Mayville,	N. D.
Taylor, Delia A.	Fairmount,	N. D.
Taylor, Rachael M.	Hope,	N. D.
Tennison, Mabel G.	Mayville,	N. D.
Thacker, Nellie G.	Hamilton,	N. D.
Thal, Olga	Lakota,	N. D.
Thompson, Mae	Minneapolis,	Minn.
Thornlund, Hulda	Bue,	N. D.
Thue, Richard	Walcott,	N. D.
Tibbetts, Anna	Hayward,	Wis.
Tiegan, Sara	Davenport,	N. D.
Tombaugh, Etta	Ellison,	N. D.
Tracy, John R.	Mayville,	N. D.
Thorstad, Inga	Cummings,	N. D.
Trageton, Ole	Northwood,	N. D.
Tvenge, W. P.	Hatton,	N. D.
Tyvand, Lizzie	Barton,	N. D.
Usselman, Clara	Hope,	P. D.
Van Arnam, Virginia	Walcott,	N. D.
Vetleson, Martin	Fergus Falls,	Minn.
Vinje, Dagny	Dalton,	Minn.
Waiste, Lucy B.	Hunter,	N. D.
Wallace, Irene	Hamilton,	N. D.
Wangsness, Gena	Finley,	N. D.
Welsh, Mrs. E.	Blabon,	N. D.
Weltzin, Marie	Mayville,	N. D.
Whitemore, Lizzie	Mooretown,	N. D.
Wightman, Harry	Galesburg,	N. D.
Wikse, Josephine	Hillsboro,	N. D.

Wilbur, Ruth A.	Cummings,	N. D.
Williams, Mrs. Prudence	Cando,	N. D.
Williams, Kate	Blanchard,	N. D.
Williamson, Christine	Hillsboro,	N. D.
Wilkinson, H. E.	Lakota,	N. D.
Windlass, Annetta	Golden Lake,	N. D.
Winston, David	Wahpeton,	N. D.
Williams, Teresa E.	Blanchard,	N. D.
Wilkinson, Edith K.	Perth,	N. D.
Wolcott, Beatrix	Colfax,	N. D.
Wolfe, Jennie Belle	Devils Lake,	N. D.

SUMMARY OF ATTENDANCE.

Post-graduates	20
Seniors	29
Other classes	327
Total	376

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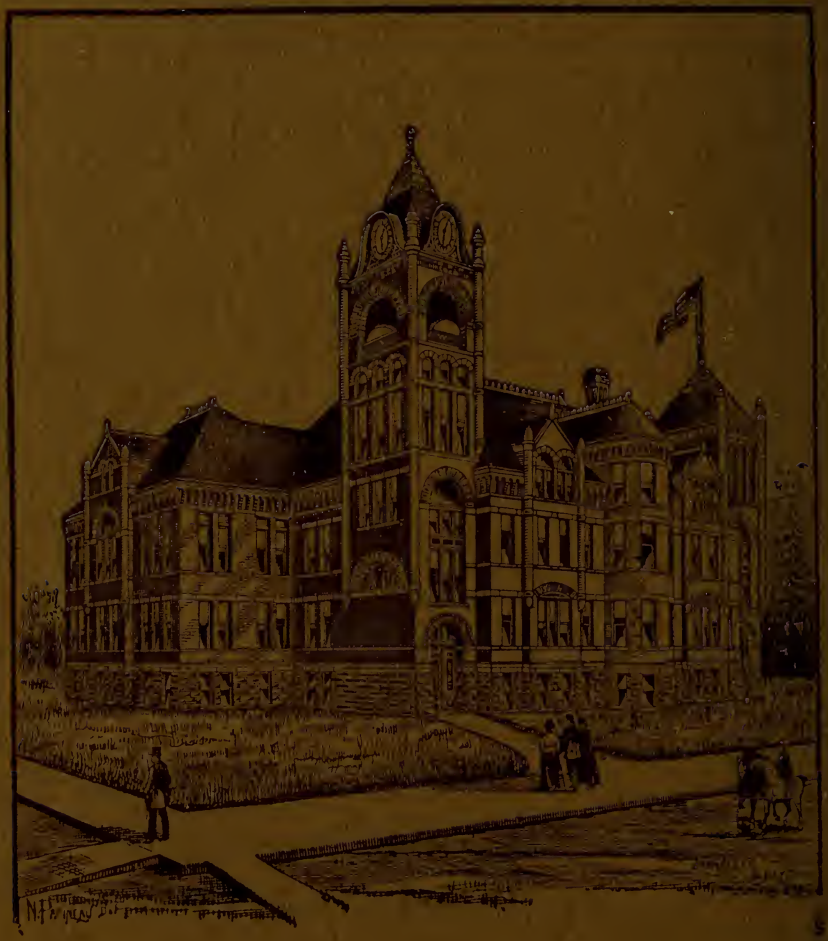

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State Normal School

Mayville, N. Dak.

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ANNOUNCEMENTS 1901-1902.

TENTH YEAR.

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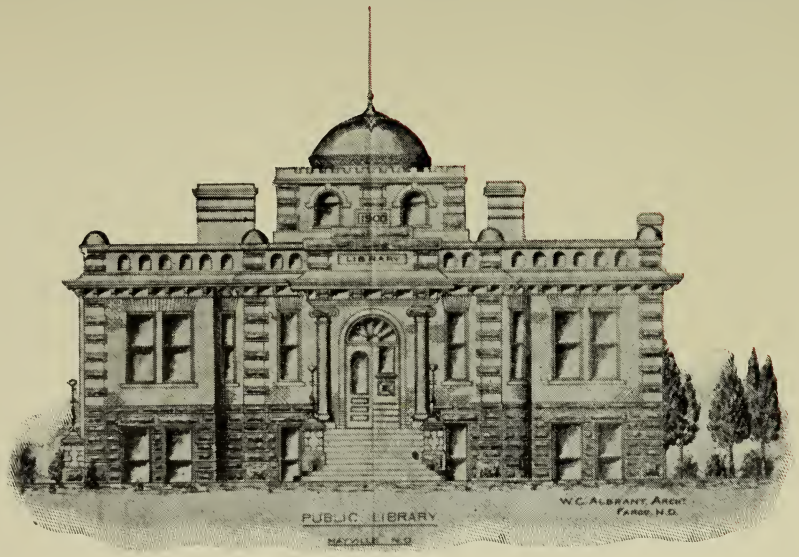

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TENTH ANNUAL CATALOGUE

OF THE

STATE NORMAL SCHOOL

AT

MAYVILLE, NORTH DAKOTA,

FOR THE SCHOLASTIC YEAR ENDING
JUNE 30, 1901.

ANNOUNCEMENTS FOR THE SCHOLASTIC YEAR
ENDING JUNE 30, 1902.

FARMER, MAYVILLE, N. D.

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CALENDAR.

1901.

FIRST TERM.

Entrance Examinations and Registration . . . . . Tuesday, September 24
Regular Work Begins . . . . Wednesday, September 25
Holiday Vacation Begins . . . . Saturday, December 21

1902.

SECOND TERM.

Entrance, Examinations and Registration . . . . . Tuesday, January 7
Regular Work Begins . . . . . Wednesday, January 8
Vacation Begins . . . . . Thursday, March 27

THIRD TERM.

Entrance Examinations and Registration . . . . . Tuesday, April 1
Regular Work Begins . . . . . Wednesday, April 2
Commencement Day . . . . . Friday, June 13

BOARD OF TRUSTEES OF THE STATE NORMAL SCHOOLS.

HON. J. M. DEVINE, Ex-Officio. . . . . Bismarck
Superintendent Public Instruction,

HON. FRANK WHITE, Ex-Officio . . . . . Bismarck
Governor.

C. S. EDWARDS, . . .	Mayville,	Term Expires 1905
C. M. JOHNSON, . . .	Dwight,	Term Expires 1905
NELS LARSON, . . .	Dazey,	Term Expires 1905
DAVID J. LLOYD . .	Fessenden,	Term Expires 1905
COL. AMASA P. PEAKE,	Valley City,	Term Expires 1905
J. HENRY PLATH, JR.	Woods,	Term Expires 1903
REV. HENRY RICHTER,	Lynchburg,	Term Expires 1903
B. S. RUSSELL, . . .	Jamestown,	Term Expires 1903
E. Y. SARLES, . . .	Hillsboro,	Term Expires 1903

Officers of the Board:–

HON. J. M. DEVINE, President.
A. L. WOODS, Secretary.

BOARD OF MANAGEMENT OF THE STATE NORMAL SCHOOL AT MAYVILLE.

C. S. Edwards, ... Mayville
C. M. Johnson, ... Dwight
Rev. Henry Richter . . . . . Lynchburg
B. S. Russell, ... Jamestown
E. Y. Sarles, ... Hillsboro

OFFICERS OF THE BOARD.

C. S. Edwards,
President.

B. S. Russell,
Superintendent of Construction.

Goose River Bank,
Treasurer.

Joseph Carhart,
Secretary and Accounting Officer.

FINANCE COMMITTEE.

B. S. Russell E. Y. Sarles C. M. Johnson

COMMITTEE ON GROUNDS.

Rev. Henry Richter C. S. Edwards
Joseph Carhart

COMMITTEE ON IMPROVEMENTS.

C. S. Edwards Joseph Carhart

FACULTY.

SCHOOL OF THEORY.

JOSEPH CARHART, M. A., President . . . . . Psychology and Pedagogy

WILLIS E. JOHNSON, Ph. B. . . . . History and Geography

DANIEL E. WILLARD, M. A. . . . . Natural Science

IDA. B. MOORE, B. A., Preceptress . . . . . Latin

KATHARINE C. LAFFIN, Librarian . . . . . Music and Drawing

CLYDE R. TRAVIS, ... Mathematics

THOMAS H. GROSVENOR, B. L. . . . . English

SCHOOL OF PRACTICE.

B. A. WALLACE, ... Principal

ANNA BARNUM, ... Critic Primary Grade

MABLE HIBBARD, ... Critic Intermediate Grade

EMMA F. LUCKEN, ... Critic Grammar Grade

MRS. E. C. DEITZ, Matron.

W. J. YOUNG, Janitor.

LOCATION OF THE SCHOOL.

Mayville is situated upon the Breckenridge and Larimore division of the Great Northern Railway, about forty miles from Casselton and thirty miles from Larimore, which are on the Northern Pacific and Great Northern Railways respectively. Mayville is one of the most beautiful and thriving of the small towns of the Red River Valley. It has over twelve hundred inhabitants, and offers the modern conveniences and comforts of living. The city is lighted by electricity and has an adequate system of water works. The moral and intellectual tone of the place are attested by the presence of five churches and a free public library representing an investment of twelve thousand dollars. The number of well-to-do families who have made themselves homes here in order that their children may enjoy its educational advantages help to make Mayville an ideal location for a Normal school.

Organization.

The State Normal School at Mayville was established by the Constitutional Convention of this state and made a part of its public school system, and was endowed by it with 30,000 acres of land. It was organized in accordance with legislative enactment, under the provision of Article XIX of the State Constitution, and opened its doors for the admission of pupils on the first day of December, 1890.

The Building.

It is a new, handsome and thoroughly constructed building. The walls are of red, sand-moulded brick, and white Kasota sandstone. The inside finish is ash, oak, birch and maple. It is heated throughout with steam, radiators being set in all rooms; it is thoroughly ventilated by a copious supply of fresh, warm air and is lighted by electricity. Bath rooms are provided for men and for women, and are supplied with an unlimited amount of hot and cold rain water.

Professional Value of Diploma

FIRST GRADE CERTIFICATE.

The Diploma of the Normal School is a certificate of the first Grade authorizing the holder, provided he is of legal age, to teach without further examination in any of the public schools of the state for a period of two years.

LIFE CERTIFICATE.

When the graduate has had three years successful experience in teaching and governing a school, the law authorizes the Superintendent of Public Instruction to endorse his diploma, making it a professional certificate of the first grade, valid for life.

Relation to the University of North Dakota.

By an arrangement with the authorities of the University of North Dakota the graduate of this school is credited with one year's work at the university. He enters the university with the rank of sophomore and graduates with the degree of B. A., when he has accomplished three years work.

Relation to the North Dakota Agricultural College.

The North Dakota Agricultural College gives to the graduates of this school the same recognition as does the University of North Dakota—graduates him on the accomplishment of three years work.

Expenses.

Tuition is free in all departments.

Registration Fee.

By order of the State Board of Normal School Trustees a uniform registration fee is charged at the Normal Schools at Mayville and at Valley City as follows: Five dollars for the entire year, to be paid by one entering the first term; four dollars for the last two terms, to be paid by one entering the second term; and three dollars for the last term, to those entering the last term.

Text Books.

All necessary text books are furnished by the school for which a library fee of $1.25 per term is charged.

Boarding.

Rooms and meals in the building cost $12 per month of four weeks, payable in advance.

Meals are furnished in the Boarding Hall to both ladies and gentlemen rooming outside the building, at $10 per month of four weeks, payable in advance.

Board and room in the town costs $3.00 per week. Rooms can be rented at from $1 to $6 per month, according to accommodations furnished.

By clubbing, students have succeeded in reducing their living expenses to $8 per month each. The work of the school is such as to demand the full available time and effort of the students, and self-boarding is advisable only when special circumstances demand it.

Dormitories.

The Dormitories are upon the upper floor. The rooms are 27 feet in length and are ample for four occupants; are heated by steam and well ventilated with fresh warm air. They are furnished as double rooms, each

room being carpeted and supplied with two large bedsteads with springs and matresses, two washstands, with set of bedroom ware, two bureaus, two tables, and is lighted by electricity. The Preceptress rooms upon the same floor and has full charge of the Dormitory. Ladies are admitted in order of applications. Each one should bring with her one pillow, two pairs pillow slips, to pairs sheets, a woolen blanket, a comfortable, a spread, napkins and towels. Occupants of the Dormitory will be expected to take entire care of their rooms.

Water-closets and a bath-room furnished with hot and cold water are upon the Dormitory floor.

Normal School Library.

The generous gift of one thousand dollars recently made to the library by Mr. J. L. Grandin has added many standard books to that important department of the school. Different members of the faculty made lists of books that were most needed in their respective lines of work which, added to those already on hand, furnish the means of doing a high grade of work on the library plan. The library is catalogued on the Dewey decimal plan and, with the assistance of a competent librarian, students find they are enabled to to come easily by that which others have labored hard for. In addition to its large list of well selected books the library is well supplied with the best current periodical literature.

Mayville Public Library.

Through the generosity of Messrs J. L. and E. B. Grandin, supplemented by the enterprise of its public spirited citizens, Mayville has established a free public library, representing an investment of twelve thousand dollars. This sum carefully invested by those possessing peculiar fitness for the task has secured to Mayville a

library of very great educational value. In addition to a large list of well selected books and all the leading papers and magazines, the library contains amusement rooms and a well equipped gymasium.

It is located a short distance from the Normal school and students are admitted to all its privileges free of charge.

Literary Society.

A literary society open to all students is in successful operation. Its meetings are held Saturday evenings, fortnightly, and are conducted according to parliamentary usages. They are designed to acquaint its members with the customs and practices of deliberative bodies, to give an impetus to literary investigation and to develop talent for literary work, public speaking and extemporaneous discussion. Open meetings are held occasionally to which the public is invited.

Religious Privileges.

The Congregational, the Episcopal, the Hague, the Synod Lutheran and the Methodist Episcopal churches are represented in Mayville and students are welcomed to them all. Students are advised to identify themselves with the church of their own or their parents' choice and avail themselves to the fullest extent of the privileges of a church home.

Admission.

Entrance requirements:

1. The applicant must be fifteen years of age.
2. He must possess a good moral character.
3. It is advisable to come recommended by some responsible person, as the county superintendent.
4. If the applicant holds a County Certificate he will be admitted without examination.

5. If the applicant holds no County Certificate he will be required to to pass a fair examination in Arithmetic, Grammar, Geography and U. S. History.

6. A graduate from a first class High School will be admitted to the Professional Course without examination.

Courses of Study.

The School offers three courses of study:

1. An English course.
2. A Latin course.
3. A Professional course.

Courses one and two can be completed by strong students, having little or no High School training, in four years; course three can be completed by strong graduates of first class High Schools in one year.

Full credit is given for all High School work accomplished in the schools of our own state and in schools of similar grade elsewhere.

The detailed statement of the course of study and the discussion of the theory of the School, both of which occur elsewhere in this catalogue, will help to interpret this statement.

General Remarks.

Be present the first day of the term.

Inform the President when you expect to arrive, and also when you expect to leave, if it is necessary to leave before the close of the term.

Students must not change or select boarding places without consulting the President.

Students are free to make and receive calls Saturday evenings, but other evenings, aside from Sunday, are expected to be devoted to study.

Students, on arriving, should report at once to the President at his office in the Normal School building, which is in sight of the station.

The Normal School desires herewith to thank the Press of the state which has held itself so ready to respond to the needs of the common schools as represented in this institution. Further kindness extended will be appreciated.

We will be glad to send this catalogue to those whom school authorities may desire to receive it, and to cooperate generally with superintendents and principals in all measures to uplift the teaching work in the public schools of the state.

It is important to them that students enter promptly on the first day of the term. The work is arranged to be of special benefit to those who can spend the entire year.

For further information address,

JOSEPH CARHART,
President State Normal School, Mayville, N. D.

COURSES OF STUDY.

ENGLISH COURSE.

	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
FIRST TERM	Reading U. S. History Arithmetic Geography Penmanship	Music Composition and Rhetoric Algebra Zoology U. S. History	General History Psychology Geometry Literature Drawing	Practice Civics History and Philosophy of Education Method in Geography and History Physics
SEDOND TERM	Civics English Grammar Arithmetic Geography Penmanship	General History Composition and Rhetoric Algebra Physiology Music	Literature Psychology Geometry Method Drawing	Practice History and Philosophy of Education Physics Civics Physography
THIRD TERM	English Grammar Geography Music U. S. History Botany	General History Composition and Rhetoric Algebra Physiology Drawing	Literature Psychology Method in English and Arithmetic Drawing Geometry	Psychology Physics History and Philosophy of Education School Law Practice

	*LATIN COURSE			Professional Course.
	SECOND YEAR	THIRD YEAR	FOURTH YEAR	ONE YEAR
FIRST TERM	Composition and Rhetoric Algebra Zoology Latin Music	Latin Psychology Geometry Literature Drawing	Civics History and Philo ophy of Education Method in Geography and History Latin Physics	Practice Psychology History and Philosophy of Education Method in Geogra phy and History Review
SECOND TERM	General History Latin Algebra Physiology Composition and Rhetoric	Drawing Psychology Geometry Latin Literature	Physiography Practice History and Philosophy of Education Latin Physics	Practice History and Philosophy of Education Review Method Psychology
THIRD TERM	Drawing General History Algebra Physiology Latin	Astronomy Latin Method in English and Arithmetic Drawing Psychology	Physiography Latin History and Philosophy of Education Practice School Law	Practice Psychology History and Philosophy of Education Method in English and Arithmetic Review School Law

*The first year of the Latin Course is identical with the first year of the English Course.

OBSERVATION AND PRACTICE IN THE CITY SCHOOLS.

Through the courtesy of the Board of Education of the City of Mayville, our students are premitted to observe and practice in certain designated school-rooms of the city, thus giving them an opportunity to acquire experience under conditions exactly similar to those they will meet with when they are employed as teachers in the public schools. Teachers are selected for such rooms who are especially qualified to exemplify the correct principles of the science and art of education and who are, at the same time, capable of sympathetic but searching criticism on the efforts of the pupil-teachers.

THEORY OF THE SCHOOL.

PURPOSE.

The aim of this school is to prepare young people for the teaching service of the state of North Dakota. To the extent that the purpose of an organization determines its character all the work of the school is professional. It does not give general culture for its own sake; it does not aim to prepare young men and young women for college, nor for the general pursuits of life. It gives general culture; its graduates are admitted to advanced standing without examination to the State University and to other colleges; its professional work upon the common school branches and other subjects includes a preparation for business, and the moral education which qualifies young men and women to be safe guides for the state's children is a good

preparation "for complete living" and is beneficial in all the walks of life, but these results, though actual, are incidental and are accomplished because the part is necessarily included in the whole.

While the applicant for admission to the school is not required to pledge himself to teach in the public schools of the state, and while it freely admits to all privileges young men and women of good character and earnest purpose, provided they are willing to submit themselves to the thorough training in scholarship and conform to the high ideals of conduct demanded in a school for the training of teachers, the management keeps constantly in mind the statute which declares that "the object of such Normal Schools shall be to prepare teachers in the science of education and the art of teaching in public schools." The school qualifies its students for various phases of public school work, from the primary grades to most departments of the High School, but its curriculum and training are especially adapted to give superior qualifications for the work of the first eight grades of the public school system.

The vital importance of this phase of public school education is apparent. The words of Edward Everett, uttered as governor of Massachusetts at the opening of the first Normal school established in this country for the purpose of improving the public schools, have greater weight today than at any previous time, and apply with peculiar force to North Dakota. "No rational man, it seems to me, can fail to see the superior importance of the common schools. They give the keys of knowledge to the mass of the people If there be any persons to whom the words 'common school' and 'common school education' convey an idea of disparagement and insignificance, such persons are ignorant, not merely of our true political system, but of the nature of man. Our common schools are important

in the same way as the common air, the common sunshine, the common rain—invaluable for their commonness. They are the corner stone of that municipal organization which is the characteristic of our social system. They are the foundation of that widespread intelligence which like a moral life, pervades the country; they are the nursery of that inquiring spirit to which we are indebted for our preservation of the blessings of an inquiring spiritual faith."

The great material resources of this state have caused an influx of people from other states and other nations. They come from many climes, representing many theories of government, different religious convictions, and speaking a multitude of tongues. This heterogenous multitude is to be formed into a homogeneous people. The most efficient means of accomplishing this result is the common school. Resources are not wanting. The public school fund is ample; school houses already numerous, are rapidly multiplying, and the call for trained teachers is most urgent. It is the special function of the Normal school to supply this demand.

As teachers in country schools and graded schools of the city; as principals of high schools and superintendents of city schools, and as county superintendents, graduates and under-graduates of this school are rendering to society efficient and honorable service and are receiving a money compensation varying according to ability and experience but averaging well with that received in other professions. In qualifying young people to secure the boys and girls of the state in their common school rights the Normal school employs the following

Means.

1. The school gives to its students a thorough, scientific knowledge of the branches they are to teach, such

as reading, grammar, arithmetic, geography, history, etc. Students come to the school knowing many of the facts of these subjects but, having studied them in the grades below the high school, they have not organized the facts into a scientific form nor learned their educational value in developing the minds and enlarging the information of the pupils of the public schools. A knowledge of arithmetic and grammar that enables one to preform accurately and quickly the problems of the counting room and to construct sentences correctly does not qualify him to use to the best advantage the science of number and the logic of the English sentence as educational instruments. A teacher must be able not only to practice correctly the art, he must have a conscious mastery of the science of each of the common school subjects of instruction. He must know each fact, and know it in relation to every other fact of the subject, and know the relation of all the facts to the general truth which distinguishes a given subject from all other subjects. True knowledge is thought in the mind corresponding to the thought in the subject studied. If the thought in the subject studied exists in an organic form, true knowledge discerns the inherent relations existing between the parts of the subject and sees the relation of each part to the general truth which explains the part and determines its place in the subject. The particular and the general act and react upon each other. The general truth must be discerned in the particular fact, and the general truth is the explanation of the fact. In true knowledge each explains all and all explains each.

The Hon. Wm. T. Harris, LL. D., United States Commissioner of Education, speaking from a wide knowledge of facts and a sound theory of education has indicated in the following the true place of the common school subjects in the Normal school curriculum:

"The substantial Normal school course deals chiefly with the common school branches, reading, writing, arithmetic, geography, history and grammar. It is often said by way of apology that could we secure pupils of advanced grades this would be unnecessary. We are obliged to do this elementary work in our Normal schools because of the fact that pupils come to us ill-prepared as regards these studies. But no matter what grade of pupils the Normal School ever receives, its professional work is chiefly done on the common branches, the reason being this: no matter where the pupil learns his common branches he learns them as steps in a graded course, and when he has climed to the higher steps he drops these studies and returns to them no more, except when he teaches them to others. Of course it follows that in the high school or college these lower branches are not reviewed. * * * But the teacher needs precisely this re-exam ination of all elementary branches. * * The Normal school therefore took up just this work at the beginning and performed it well. It induced in the young men and women preparing for the work of teaching the habit of taking up the lower branches in their relations to the higher—taking them up constructively, as it were. For to study arithmetic in the light of algebra and geometry is to study it constructively. Its rules are derived from algebraic formulae and are to be demonstrated by algebraic processes. So the details of geography have their explanation in formative processes of land and water as treated in physical geography, and the sciences of which it is a compend. The first learning of a subject is largely the work of memory. The real knowing begins with reflection upon the data and the discovery of inter-relations. The class work and relations of the Normal school astonish the student at first. He supposes himself to understand the subject, but he discovers there are a thousand phases which he had

not thought of. He learns the second lesson with some of these possible side-questions in view. He improves from day to day, and in the course of a year he has acquired a different ideal of the best method of study. He has passed from the text book method to the method of investigation. Formerly he would have held the pupil responsible to learn the words of the book and would not have probed the understanding. Now he goes directly behind the words of the book into the pupil's understanding and teaches him how to think—how to investigate. He is to study the book, but to critically compare one statement with another—penetrate to the construction of the book itself. He is to go out of the book into all his own experience, to verify or refute its statements. He is to go to other stores of information on the subject in this work of verification and critical comparison. When this is done the student finds to his great surprise that the elementary branches stand for the five great branches of human learning in its entirety, and that a proper study of them opens for him all the windows of the soul."

Nothing can take the place of these elementary branches, but they are supplemented in the general curriculum of the Normal school by courses in the philosophy of history, higher mathematics, higher English, Latin, music and drawing, experimental science by the laboratory method, etc. These subjects are valuable, but their chief value, from the Normal school point of view, is the increased mastery they give over "the elementary branches [which] stand for the five great branches of human learning in its entirety."

2. But mind is the subject of education. To develop and train the mind is the real purpose of teaching. To train a faculty or power of the mind it must be exercised upon its proper subjects and in accordance with the law of its nature. A knowledge of mind—child mind

and mature mind—is to the teacher what a knowledge of the body is to the physician. Through the teaching of psychology as a science and by discovering in every subject the nature, processes, laws and products of the human mind the Normal school seeks to give to its pupils a working knowledge of the facts and principles of mental science which the teacher needs in developing the minds of others.

3. The school reveals to its students the way in which the mind thinks a subject. It leads them to see that a rational method of instruction depends upon the nature of the subject studied and the laws of the thinking mind at the various stages of development. It teaches them the principles of method in general and helps them to discover those principles in particular subjects of instruction such as reading, grammar, arithmetic, geography, history, etc., The method of the primary, intermediate and more advanced phases of public school work is make the subject of thorough investigation.

4. The school aims to give to the future teacher of the state's children a correct theory of life, and helps them to determine, in the light of human destiny, the true purpose of education and to see the place of the school among the institutions of society and to appreciate its special functions. Literature, general history, the science of education, and the history of educational theories furnish the data for reaching a sound conclusion. The best minds of all time have wrought upon the problem of school education. Systems of education have varied from time to time according to the theories of life which have prevailed at different epochs. A study of those theories, recorded in the history of education gives to the future teacher breadth of view, judicial candor and steadiness of purpose. An effort is made to have all the work and discip-

line of the school conform to a true ideal of life and to show by example how a school may be made the means of developing character by a constant appeal to the highest motives to which the student is capable of responding and by securing prompt and willing obedience to reasonable requirements.

Correlation of Professional Work.

The school is an organic, self-consistent whole. Each part by being in accord with the purpose of the school as a whole, is in harmony with every other part, and the student, as he advances, finds all previous work helpful to him in taking the next step. This relation exists between the study of subjects, such as geography, arithmetic, history, etc., on the one hand, and of psychology, science of education, method and practice on the other. The study of elementary subjects is so conducted as to be a preparation for psychology; the general principles of method are derived from the logical method inhering in the nature of the elementary subjects and from psychology; the practice work is based upon the previous work—the study of subjects, of psychology, of the science of education and of special methods which consist in an application of the principles learned in the science of education to the consideration of the teaching of particular subjects, such as arithmetic, reading, language, geography, etc. The same principle which correlates parts of the school regarded as a whole, and gives to it the character of self-consistency, applies with equal force to the facts of each subject. It is not an accident that some facts belong to arithmetic, some to geography, and still others to grammar. Some facts are arithmetical, others historical, etc., in the nature of the case; that is to say, there is some general truth common to all the facts of a given subject which explains the meaning of those facts, unites them into a group by

means of a common truth and, at the same time, separates them from the facts of all other subjects in which that truth does not inhere. To see the general truth in a given subject, to see all the particular facts as related to it, and to see the forms in which they address themself to sense-perception, to memory, to imagination, to the understanding and to the reason—this scientific and psychological study of the subjects which the graduate of the Normal school is to use as instruments in educating the children in the public schools, is a very important element in his professional training. But that it may be in the highest sense effective this study of the elementary subjects must be seen in its relation to other parts of professional training. Having discovered in reading, arithmetic, geography, grammar, history, etc., products of sense-perception, memory, imagination, the understanding and the reason, the student is furnished with a basis for comprehending the laws and conditions of perception, memory, imagination, the understanding and the reason as dealt with in psychology, and having discovered the nature of the branches of study as given above, and having discovered in psychology the law of the learning mind, the student of pedagogy is prepared for the study of the science of education, which considers the adaptation of phases of subject-matter to corresponding stages of mental growth—from perception to reason—and the arts and devices which may be employed to stimulate the mind of the learner to appropriate the phase of a subject which he is capable of grasping at a given stage of development. Having learned these general truths, the student is prepared to apply them in detail to the various subjects, such as arithmetic, language, geography, history, etc., and this constitutes special method. Special method shows definitely the order in which the phases of a given subject unfold to the intelligence of a learner from the primary grade up,

and also the means to be employed to stimulate him to take the successive steps involved in a mastery of the subject. This phase completes his preparation for giving instruction, and the student is now ready to enter the practice school and acquire skill in the art of teaching. Here he will find it necessary to re-adjnst his previously learned theories—he must adapt himself to conditions as they exist; but the more thorough his preparation, the more clearly he conceives the end from the beginning—the more definitely he has thought out the steps by which his class is to go from the position in which he finds them to the goal proposed—the more energy he will have to meet the unexpected and the more readily can he adapt himself thereto.

Outlines of typical subjects, illustrating the foregoing principles, are given on the pages that follow.

DEPARTMENT OF HISTORY AND GEOGRAPHY.

WILLIS E. JOHNSON.

GEOGRAPHY.

(Three Terms.)

Geography deals with those truths which pertain to the earth in relation to man's institutional life, placing immediate emphasis upon business life.

In the language of Guyot, "Geography deals with the earth as the home of man." While the subject-matter of geography deals with nature and human nature, it is always faced one way, toward man. The study of geography as a natural science exclusively, is like the play of Hamlet with Hamlet left out. Seasons, winds, rainfall, surface-relief, soil products, and industries are not geographical topics, unless they are studied in their interrelations as they make a home for man, and form a basis for his union in business, the division of labor, and the building and maintaining of society.

Geography as a subject consists in relations; it is the thinking of society in its formative process as based upon nature and nature's laws.

To have a clear concept of these relations implies a constructive knowledge of society and of the essential natural phenomena of the earth. The acquisition of the

former is begun in the course in History and that of the latter occupies the major portion of the time of the classes in Geography during the first two terms.

While "one and inseparable," geography may be thought into the logical divisions, mathematical, physical, and political. This division is made on the basis of the aspect in which the earth is viewed.

In mathematical geography the earth is seen as a planet and the culminating truth of this phase is the earth as divided into astronomical belts of heat.

It usually requires about six weeks to acquire a teacher's view of the earth as a planet, for the knowledge of mathematical geography acquired in the common school seldom includes more than a few formal abstractions based excusively upon diagrammatic illustrations and lacks vivid experiential and rational insight. This concept of the earth in its most general geographical relations conditions and leads to a view of the earth in its more special relations.

In physical geography the earth is viewed as an organism, and the geographical elements,—land, water, air, physical products; and the geographical processes,—wind, currents and other movements among the elements,—are studied as they are interrelated and form the material basis for the life of man. Physiography, the science of land structure and sculpture and the evolution of surface relief and soils, comprises much of the work of physical geography.

In political geography the earth is viewed as the theatre of man's actions and its central truth may be said to be man's use of the earth and its elements. During the first two terms work in geography the student has viewed in their organic relations the essential elements of the natural phenomena which condition industrial life and

through that all institutional life. In his study of United States History he has organized some of the fundamental facts of social elements as they have entered into our national life. He is now in a position rationally to construct political geography.

History.

History deals with the phenomena of social interaction and evolution. It traces the successive stages in the development of the institutions of society, the "expansion of spirit" and of its endeavor to bring institutions into harmony with its own nature. Stating this negatively, man is conscious of wrong limits and endeavors to make those which are negative, positive. This progress in removing limits, which history records, is determined by the nature of mind and the nature of its negative, environment. Mind in itself is free but in objectifying itself in language, art, and institutional forms, finds limits to an adequate expression of its inherent nature. These limits are three-fold:

1 Physical limits, or those limits which arise because of the dual nature of man by which he is related to nature.

2. Institutional limits, or those arising from man's relation to his fellows. These include all the social relations of man and may be classified as (a) domestic, (b) industrial, (c) educational, (d) polite society, (e) religious, and (f) civic. In each of these six institutions we recognize clearly distinguishable subordinate institutions embodying some individual expression of the general idea of the institution as a whole.

3. Personal limits, or those arising from man's relations to his ideal self.

The establishment of right limitations, or freedom, occurs through the medium of society. The institutions

of society, by their interactions and growth, are the media for the realization of the spirit of man which history records. Thus a study of history is a study of the "universal man" as he expresses himself in institutions. While these institutions of society are mutually the interdependent and some peoples and times best illustrate development in one institution to the exclusion or slurring of others, the evolution of the state is the dominating line of development. "The state gives direction not only to political history, but to some extent, to all history." Thus especial emphasis is given to the development of civic institutions. "History is philosophy teaching by example." The events, places and outward phenomena of history are only "eyes" through which history itself is studied.

United States History.

The first term's work covers the period ending with the adoption of the constitution and consists of a study of the following:

1. The institutions of society as they were in Europe immediately antecedent to and during their transplantation to this continent.

2. Those events in contemporaneous European history which modified conditions in our institutional life.

3. The elements of civic life as they developed in English colonies with the local modifications due to the influences of varying geographical and industrial conditions.

The second term's work is almost exclusively a study of our national development under the constitution. A brief sketch is made of the Industrial Revolution, our economic history, the development of slavery and of our international relations as they have affected our civic growth.

Civics.

History deals with institutions in the process of becoming. Civics deals with civic institutions as they are, the product of the developement of complex human nature. The first term in civics, immediately following the course in United States history, consists in an examination of the inter-relations among the elements of civil government which have been traced in their development from simpler forms.

Not so much a knowledge of the facts of civil government as of the relations of its truths to the spirit of citizenship and rational patriotism is considered the educational value of the subject. In this subject, however, as in all others, to be free one must know the truth, and a good working knowledge of the machinery of our government and political system is acquired.

The work in advanced civics follows the work in United States history, elementary civics, and general history and is divided into two parts:

1. Comparative civil government, in which the governmental systems of the principal nations of the world are studied and compared with our system.

2. A course in economics.

Method in Geography.

The work in this subject is based upon the work in Geography and in Psychology. The following outline indicates to some extent the nature and scope of the work:

1. The principle of organization of the subject and what it determines. It is seen as determining what truths belong to the subject and what do not, classifies the subject and indicates its relation to other subjects.

2. The educational value of Geography.

3. The mental processes in geography teaching:

a. Presentative forms. Familiarity with geographical elements and such geographical processes as come within the range of the child's experience.

b. Representative ideas. Natural and social conditons which must be learned from the experience of others and from representations.

(1.) Means employed in acquirement:

(a) Pictures, verbal and those appealing to sight.

(b) Molding and mapping. These media for expression and interpretation of geographical ideas to have their full educational value need special attention. The steps are as follows:

(1) Molding and mapping known regions, in their presence and from memory.

(2) Recognition of known regions through maps and moldings of them.

(3) Interpretation of unknown regions through representations.

c. Thought relations. Conditioning elements of life, of production, and of commerce; dependence and interdependence of social and natural conditions; the formation of geographical concepts.

4. The relation of nature study to geography work.

5. After a consideration of the way the world appears to the child upon entering school, how he is to grow into an adequate conception of it and the successive intervening concepts, a common school course of study is worked out, not for the sake of a course of study so much as to see how the subject unfolds in the mind of the child.

METHOD IN HISTORY.

The intimate relations existing between geography and history make the work in method in geography contribute to an understanding of the method inhering in history-teaching as based upon the nature of the subject

and the nature of mind. The purpose of this study is to get an insight into the mental processes involved in thinking history, the phases of historic material adapted to contribute to the formation of historical concepts and the means to be used in adapting phases of the subject-matter of history to corresponding stages in the development of the mind of the child. The following outline indicates the principal topics discussed:

1. The principle of organization of history in relation to the facts and phases of the subject.

2. The educational value of history.

3. Materials of history.

a. Sense phase of history. Those materials appealing to the senses and the sensuous phases of memory and imagination.

(1) First hand material. Community life, the outward events in the institutions constituting the immediate environment of the child, especially the family and industrial society. No differentiation is made between history and civics in the choice and arrangement of these materials, an election, the opening up of a new road, a political campaign, the regulation of the affairs of the school, etc., all fitting into this study, largely on basis of contiguity.

(2) Materials from distant places and times; e. g., a picture of Washington, the sensuous elements of succeeding phases, all susceptible of sensuous imgery.

b. Representative phases of history. Materials appealing to the higher representative powers and inferential reasoning. The story of history, the real and the ideal.

c. Logical phase of history.

4. The organization of the materials of history.

a. Local, current and graphic.

b. Stories of real persons and of actual events.

c. Myths, legends, folk-lore and other fictitious history.

d. The application of the culture-epoch theory; in the organization of material from European history; in the organization of U. S. history.

e. The use of the categories of thought in history and teaching.

DEPARTMENT OF NATURAL SCIENCE.

DANIEL E. WILLARD.

Physics.

Physics deals with the phenomena of FORCE. There is no matter known to us except through the phenomena of FORCE. All the phenomena of Physics therefore may be resolved into Force-phenomena. Newton showed that there is a constantly acting Force existing among all particles of the known universe. This is known as the principle of gravitation. In the laboratory this Force manifests itself in mass-phenomena, molecular phenomena, and ether-phenomena. There are therefore three departments of Physics representing these three classes of phenomena. The phenomena of falling bodies, adhesion, pressure of fluids upon restraining walls, belong in the department of mass-physics. Surface tension, elasticity and compressibility of gases, cohesion, sound, are examples of molecular-physics. Machines like the lever and pulley, the composition of forces, fall under the subdivision of falling bodies, and hence under mass-physics. The common or "suction" pump is a machine which is explained under the phenomena of mass-physics; the force-pump under the molecular phenomena of compressibility and elasticity of gases. The phenomena of sound are the phenomena of the vibratory motion of molecules in the mass. Heat is a mode of motion, a manifestation of molecular Force.

If, as is supposed, all the molecules of the universe are in rapid vibration and that as this vibration increases in intensity, - - - - correspondingly as sound increases in loudness, - - - - the mass becomes hotter, then heat is a manifestation of Force, a mode of motion, and comes under the law of falling bodies, the law of gravity, for its explanation. In Astro-physics it is shown that a cold nebulous mass may become intensely hot by its own falling together, i, e., by its own gravity, just as upon the earth it is a familiar fact that colliding bodies generate heat. Light is the phenomenon of vibratory motion of ether as the conveying medium, just as sound is in a molecular mass. Sound acts through comparatively slight distances at a slow speed. Light acts through indefinite distances at an enormous speed. We know of the existence of ether only by the phenomena manifested through it. We know of the existence of sound-waves only by the phenomena manifested. Both are manifestations of Force. The light-vibration in the ether is set up by energy imparted to it from some source. If this vibration produces a disturbance upon the retina of the eye light is seen. If the vibration is communicated to the molecules of the earth and a vibration set up in these, heat is produced. In like manner the light-vibration might be transformed into a vibration which could produce a disturbance upon the nerves of the ear and so sound would be heard. Magnetic polarization and electric stress are manifestations of conditions due to vibratory motion in a magnetized or electrified body.

Botany.

The science of Botany is the science of Plant life, as Zoology is the science of Animal life. Plants and Animals are organic things; both live and grow and reproduce their kind by means of vital processes. These pro-

cesses are less complex in the Plant than in the Animal kingdom. Rainwater, earth, and sunshine constitute the materials out of which Plants build their tissues. The lowest forms of plant life bridge the chasm between the inorganic and the organic worlds. Upon the work accomplished by the plants in transforming mineral substances into starches, sugars, oils, and albuminuos substances depends the life and growth of the Animal kingdom. Nor is there any fixed line separating the vegetable from the animal kingdom. The lowest plants and the lowest animals are undistinguishable one from the other. The two kingdoms however represent divergent lines ot development. Yet the vital processes of Nutrition and Reproduction are essentially the same in each, the nutritive processes in animals being carried to a more complex degree than in plants, advantage being taken by animals of the materials ready made in the tissues in living or dead plant forms.

The cell is the biologic unit. Groups of cells of like character and function in an aggregate organism constitute tissues; groups of tissues make up organs; a collection of organs constitutes an organism. An organism may consist of a cell or of an aggregation of cells. In the aggregate group of cells there may be all degrees of differentiation from that of the homogeneous collection of loosely related cells to those most complex and divergent in character in different tissues. This differentiation has its foundation and explanation in the physiological division of labor.

In the lower orders of Plants are seen the simpler and less differentiated cell groups. The Diatoms and Desmids are examples of single cells living independent lives, as does the Amoeba among Animals, one cell performing all the functions of Nutrition and Reproduction. Recep-

tion of air and food, or breathing and eating, absorption and assimilation, by which the body lives and grows, exertion, by which the wastes are discharged, and also the intricate process by which through cell division, the preservation of its kind is accomplished, all these functions are resident in a single cell, and this often of microscopic size.

One of the fresh-water Algae, the Spirogyra, called pond scum, or green slime, or sometimes, absurdly, frog-spittle, is an example of a simple aggregation of vegetal cells. These grow in the spring from a spore which has been lying in the water during a period of rest. This spore under the proper conditions of warmth and moisture begins active physiologic work, and soon by subdivision of itself through the process of cell division an immense number of elongated green cells has been produced. These in turn produce resting-spores like the first and so the cycle of life is completed.

In the higher order of plants the vegetetative and productive processes become more and more distributed to special cell-groups. More and more, homogenous cell aggregates become differentiated into tissues and special organs.

The Fungi constitute a degenerate class of plants, but they illustrate the principle of differentiation. They have neither root nor digestive organs (leaves). They lack Chlorophill, the sunlight using principle of protoplasm. They therefore appropriate from other plants or from organic remains, material which has been already digested. They are specialized for stealing. The so-called order of Lichanes is really a partnership between Algæ and Fungi, in which by mutal accommodation each helps the other, a sort of physiological union into a social family.

The Mosses have groups of cells which more

especially take up materials for the support of the plant while others perform the work of digestion. Others still act as servants which hold the plant in place. Mosses have not true roots, but they have absorbent, digestive and special reproductive organs. They are improved in structure over the lower orders of Algæ and Fungi, and anticipate the still higher Ferns and Phanerogams.

In the Ferns special absorbent organs, roots, conducting and storage organs, stems and digestive organs, fronds and special productive organs, spores, have been developed.

Finally the differentiation of cells and the development of tissues, and the organization of these for special functions has gone to the highest extent in the Flowering Plants or Phanerogams. The typical Flowering Plant consists of three more or less complex organs, the root, the stem and the leaves. All the parts of the plant are some special form of the tissues of these. They are aggregates of cells each made up of a number of tissues, and each does its own peculiar kind of work for the plant organism. The organization of plants into "societies" or colonies is an expression of the adaptability of individual organisms to conditions of environment and the requirements of the tissues.

Zoology and Physiology.

(Zoology one term; Physiology, two terms.)

Biologic science deals with the phenomena of vegetal and animal organism. Animal biology is represented by the science of zoology. Physiology is the science of the higher biologic functions represented in the animal, man. A course in animal biology may therefore include the sciences of zoology and physiology. By the study of type forms of the animal kingdom a general idea of biologic processes is gained. In the amœba the simplest and most

general of the animal life functions are represented. In the hydra, higher and more complex functions occur; the biologic processes proceed from the more general to the more specialized. In the mollusk and the worm physiological differentiation has gone still further. The general property of irritability is no longer manifested by all parts of the body alike, but is localized in a nervous system. So digestion is no longer a general function of the body-mass, but a definite alimentary tract has become specialized. Similarly special organs of circulation and excretion have been developed. In the crustacean and insect these functions are still more highly specialized. Among vertebrate types the fish occupies the lowest rank, because specialization has been carried less completely out than in any other of this branch;yet the fish represents a degree of specialization in structure and in function far exceeding any invertebrate animal. The sluggish circulation of the fish (often called cold-blooded) and the yet simple digestive tract and nervous system are surpassed by those of the air-breathing and hence warmer blooded reptiles, between which appear the intermediate amphibians; and these are in turn surpassed by the birds with high blood oxidizing powers, elaborate digestive tract, and organs of special sense. And finally the maximum of specialization, the higher development in anatomical structure and physiological functions, is represented in the mammalia class. At the head of this great and varied class, mammalia, stands man—the highest type of organic specialization, the one transcending all other types in the climax of the property of irritability—self-conscious spirit.

The study of anatomical structure and physiological functions of representatives of the lower orders constitutes an introduction to the science of zoology. The simpler physiological processes in these forms prepare for the more

complicated problems of human physiology. In the latter the vital functions of nutrition and excretion have reached the maximum of complexity. The intricate phenomena of anabolic and katabolic change are fairly met only when preceded by the more general study of zoology—the life processes of the lower animals. The science of human physiology leads on the one hand to hygiene and the study of sanitary conditions and to pathology and, on the other through the study of the special phenomena of irritability, to psychology.

Geology.

The science of Geology is one of the most fundamental of the natural sciences. It deals with the earth as the physical basis of organic phenomena. The science is a comprehensive one, embracing a diverse range of subjects. Mining and metallurgy, mineralogy, crystalallography, vulcanology, seismology, are departmental sciences of this great subject. They all directly or indirectly bear upon the physical relations of organic forms upon the earth. Under the phenomena of organic life are included all plant and animal relations; and these include the refined and special phases embraced in Geography, Economics, and Sociology. History, which is the written record of what has been done by the self-conscious animal, Man, is determined ultimately by geologic factors. The phases of the science which bear more directly upon organic relations are Physiography, here used to mean the evolution of land forms; and the development and distribution of plants and animals, which includes historic biologic evolution as revealed in the fossil remains of the earth, and the geographic distribution of plants and animals so far as determined by topographic conditions. The earth is the common mother of us all; and geology deals with the earth in this sense, viz., with the form of the landscape, with the character of

the land itself, and hence with the factors which determine the life of man and animals. It is therefore a basic factor in the study of the biologic sciences, and in economics. Before rail roads, rivers determined lines of travel, and hence the distribution of population. Rivers have done more than this: they not only have determined the location of cities and given direction to the character of the resources of a region, but they still determine the trend of rail roads, and, by their relations to the soil, the industries of the people. Not only that the overflowing of the Nile should have given rise to the greatest civilization of ancient time, not only that the geologic fact of a great lake-bottom should become the greatest cereal-food producing area in the world, but every river in every land is modeling the face of the landscape and changing the character of the soil; thus these environmental factors are moulders of civilization.

Astronomy.

The word Astronomy means literally star-arrangement, or the orderly distribution of the bodies of the universe in space. The largest conception, spatially considered, which human intelligence is called upon to grasp is that of the UNIVERSE. As our knowledge of the stellar bodies in space extends the more clearly does it seem that the Universe is a great system, controlled by uniform and universal law. So far from the stars being "fixed," they are now known to have proper motions in space, and some of them at least are now shown to have motions corresponding to the orbital motions of the planets of the Solar System. The Galaxy or 'Milky Way' is made up of a very great number of stars, some brighter, some fainter, and many invisible except by the aid of the modern telescape, - - - - - a great zone of Star-dust, as it were. This Galaxy circumscribes the visible Heavens. Nearer to it

are the greater number of the brighter Stars of the heavens. In its neighborhood are the greater number of the resolved nebulae and multiple stars. In the regions roughly 90 degrees of arc from this zone the irresolvable nebulae are more numerous.

The Sun, which is the centre of a System better known to us because of its nearness is a star which, viewed from the distance of the nearest fixed star, would be of about the second magnitude. Its system of revolving secondaries would be too small to be seen or known. The Sun and attendant planets composing the Solar System may therefore be a type of other Star systems, the attendant satellites or planets of the Star-suns not being of sufficient size to enable us to know of their existence. The Sun, the planets and the satellites are all bound into a system by the great principle of gravitation. This principle is probably the key to the explanation of the origin of the individuals of the system from a common mass, the Sun.

Many multiple stars have been resolved into systems in which the components have a similar definite gravitative relation to each other to that of the Sun and planets. And many supposed nebulae have been resolved into multiple stars. But there are irresolvable nebulae, nebulae which no power of the telescope or spectroscope has shown to be made up of component individual bodies, and which the spectroscope has shown to be nebulous.

We may therefore conceive of the UNIVERSE as a great SYSTEM controlled by the law of gravitation, in which all the stars are component members of the whole, the Sun being one of the multitude of the stars, and each star one of the multitude of Suns, and these all moving through space in definite directions (and it is known that the fixed stars do have proper motions.) The Milky Way may therefore be thought of as the equatorial belt or zone

of the Universe, where are aggregated the greater number of the stars in response to the same law of centrifugal force in a rotating mass as that which causes an equatorial bulging of our terrestrial sphere. The equatorial diameter of the Universe would therefore be greater than the polar diameter, for the same reason that this is so in the earth and other planets, due to rotation. In the region of this equatorial zone the greater number of the brighter stars, and a large percentage of all the stars are grouped. The heavens are more barren of stars, and the irresolvable nebulae, the more flocculent patches of nebulous cloud, those which have not yet integrated into more solid form, are more numerous in the polar regions of the Universe sphere.

From the vast distance it is impossible to discern the planetary bodies, if any exist, which attend upon other Suns than ours. Binary and multiple stars however furnish an analogy to our Solar system, for the components of a double star revolve around each other in orbits of known extent and with computed periods.

Our sun is a star having a group of attendant planets instead of the corresponding component such as would be the case in a double star, or as in a multiple system. Whether the Nublar Hypothesis correctly explains the origin of the Solar System may, in the light of recent investigations, be fairly questioned. But to explain the structure of a system it may not be deemed necessary to explain its origin. There would seem to be a marked similarity, amounting to uniformity and suggesting uniformity of origin binding the whole into one great system, in the structure of the Solar System, the binary and multiple star system, and the somewhat hypothetical universe-system.

With this view, the whole Universe is a progressive,

orderly system tending onward in a series of successive changes of infinite extent. Systems within the Great System may be born, develop and perish, while the Great Whole moves on through an ever endless series of Eternities.

LATIN.

IDA B. MOORE.

(Three Years.)

Latin is entitled to a place in the cirriculum of a Normal School because of the light it throws upon English. The student's conception of English grammar is broadened and deepened by a study of Latin grammar. The more elaborate system of inflection of Latin and the very strangeness of the unfamiliar language compel attention and re-require observation of thought relations and the ways of expressing them. At almost every step there are opportunities for making instructive comparisons between the two languages. Comparative grammar gives an insight into the construction of many an idiom that would otherwise seem in explainable. The essence of mood is more clearly grasped with the assistance Latin can give, because it offers, in its different forms for different moods, something more tangible and definite.

The student of Latin appreciates fine distinctions in the use of words to a degree almost if not quite impossible to one who knows no Latin.

To any one at all conversant with language studies, our Commissioner of Education, Hon. Wm. T. Harris, will seem to have spoken very fairly as well as very forcibly, when he says that the English language "though Germanic or Teutonic in its colloquial vocabulary and in

its gramatical structure, nevertheless resorts to Latin and Greek for all of its technical words, and for all those words which express fine distinctions of thought or subtle shades of sentiment. * * The language of the Romans is the language of the political and civil organization of individuals into institutions, and these constitute our civilization. For the most part, words expressing civil and political relations in all the languages of Europe are Latin." It is apparent that a knowledge of the elements of Latin would be equally beneficial to those who in a life of leisure desire to cultivate an appreciation of literature, and those who take up the burden of citizenship and assume directive power over affairs. Certainly it is important that the teacher, of all persons, should be a master of the language in which is expressed the civilization in which he lives, and that he be able to confer that mastery upon those who are to take their places in it, and take up the duty of carrying it still farther.

Nor is it to be forgotten that the teacher's general culture should not be neglected while he is making special and technical preparation for his work. It is the aim of the work in Latin to awaken in him an appreciation of the language and literature of Rome and to give him a glimpse of her contribution to modern civilization. Endeavor is made to ground the student thoroughly in the elements of Latin and to use so well the time allotted to it that those who desire to continue their work in higher schools may find themselves at the least possible disadvantage.

Latin is begun in the second year of the course. During the year the elements of the language are studied and complete mastery of forms is the predominant aim. At the same time elementary points of syntax are learned and much attention is given to word formation—roots,

prefixes and suffixes. It is believed that with mature pupils better results are obtained by the use of the systematic grammatical method than by the so called inductive method. The second year of the Latin course is devoted to Cæsar and Cicero. Two books of Cæsar and two orations of Cicero are read accompanied by a systematic study of Latin grammar and composition. In the last year of the course six books of Virgil's Æneid are read and the emphasis is shifted from grammatical structure to literary workmanship.

Department of Music, Drawing and Penmanship.

KATHARINE C. LAFFIN.

MUSIC.

(Two Terms.)

Music as a branch of study may serve as a valuable aid in physical, intellectual and moral culture. The schoolroom in which singing is a daily exercise is pervaded with an atmosphere of true culture and refinement.

The rapidity with which the mind must work to see at a glance the tonal and rhythmic relations of each note, to grasp the musical phrase, to read the words connected with it, to give the proper rhythm, and the variations required in power and time, demand a concentration of attention the educational value of which is very great.

Musical perceptions and intelligence in reading music are based upon a knowledge of the tonal relations existing in the intervals of the Major Scale which is the unit of thought in tune. The ear must be trained to recognize these tonal relations, the eye to recognize the notation, peculiar to each, on the printed page, and from these mental impressions must come their expressions in pure, soft quality of tone.

The ability to read at sight depends upon quick perception of tonal relations, a knowledge of rhythmic relations and a knowledge of musical notation.

FIRST TERM.

I. Melodics.

Development of Major Scale. Study of tonal relations with reference to given tonic. Major Scale in all keys. Chromatic tones. Musical notation.

II. Rhythmics.

Plain forms of rhythm with undivided beat. Metronome work. Thinking time. Keeping time. Rhythmic notation.

III. Dynamics.

Voice work. Mechanism of human voice. Care of voice. Use and abuse of voice. Quality of tone. Volume. Force. Exercises for development and improvement of voice.

IV.

Rote singing and its place in school music. Part singing. Modulation. Harmonious effects.

V.

Simple counterpoint.

VI.

Culture value of music: (a) Physical. (b)Intellectual. (c) Aesthetic. (d) Ethical.

SECOND TERM.

I.

More difficult intervals. Development of Minor Scale. Development of Chromatic Scale.

II.

Exercises in greater rhythmic difficulties. (a) The divided beat. (b) Syncopation.

III.

Advanced work in voice culture. Interpretation of school song with illustrative lessons.

IV.

A brief course in the history of music.

V.

Method, or adaptation of phases of the work to corresponding stages of development.

Chorus Singing.—A very essential part of the musical training is the daily chorus practice given the entire school. The voices are tested and properly classified, each student receiving individual attention in being assigned a place in the chorus. The study of standard secular and sacred choruses forms a vital part of the daily rehearsals, contributing in a large measure to the musical growth of the student body.

Drawing.

(Two Terms.)

The aim of the course is to give students skill and freedom in the use of drawing as a language and to lead them to an appreciation of the beautiful in form and color as revealed in nature and in the study of works of art. The correlation of the subject with the various branches taught in the public school is shown and an effort is made to give skill in the use of drawing as a means of illustrating the picturable elements of other branches of study. The rudiments of drawing, both Mechanical and Free Hand, are presented under the three divisions of drawing as to use, namely: (a) Representation, appearance of form. (b) Construction, facts of form. (c) Decoration, or enrichment.

FIRST TERM.

I.

The study of form as seen in Nature—including

plant and animal study as well as out-door sketching and pose drawing for illustrative purposes; the study of Form from geometric solids and from common objects applying principles of free-hand perspective.

II.

The study of color as used in connection with sketching from nature, in simple decorative design from copies, and in simple original decorative design. Light and shade with pencil and charcoal.

III.

Expression. Clay work. Paper folding and cutting. Making of objects from developed patterns. Freehand drawing from geometric solids and from nature affording practice in the use of the different mediums—charcoal and pencil drawing, water colors, brush and ink. Blackboard illustrating: (a) Drawing from dictation. (b) Drawing from memory.

IV.

The aesthetic element. Schoolroom and home decoration.

V.

Adaptation of phases of the work to corresponding stages of development in primary and intermediate grades. In the rural schools.

SECOND TERM.

I.

Mechanical drawing. Use of instruments. Working drawing. Original design.

II.

Elements of picture making. Grouping unity. Variety. Repose. Perspective. Point of vision. Horizon line. Effect of light and shade. Application of the foregoing in charcoal and water colors.

III.

Decorative forms. Unit of design. Arrangement. Historic ornament.

IV.

Color and its relation to beauty: (a) Spectrum scale. Shades. Tones. Tints. (b) Harmonious combinations. (c) Color in nature and in art.

V.

Adaptation of phases of the work to corresponding stages of development in the common schools.

Penmanship.

(One Term.)

The student is taught to appreciate the value of good penmanship, is required to become a legible and rapid writer, and to know how to secure like results as a teacher of the subject.

The vertical form of writing receives the most attention. Arguments for it are now accepted by progressive educators. There is no longer any doubt but that it is more legible, more hygienic, simpler and more rapid than the slant.

I.

Theory:

(a) Position—of body, of paper, of pen.
(b) Physical movement.
(c) Study of form of letters to facilitate the getting of the mental picture of the letter.
(d) Elements of letters. Spacing.
(e) Classification of letters.

II.

Practice:

(a) For form and movement.
(b) For speed in writing.

III.

Discussion of various forms of writing, with special attention given to the advantages of the vertical form.

IV.

Methods of teaching.

Department of Mathematics.

CLYDE R. TRAVIS.

ARITHMETIC.

Number is the relation of one magnitude to another; and its use is to measure magnitudes, i. e. to express the value of measured magnitudes in terms of unit magnitudes.

Every measurement necessitates three elements;—magnitude to measure, unit of measure, and number.

All work in mathematics consists of relating quantities, correctly judging their quantitative relation, and expressing this in intelligible terms.

There is a gradation of quantitative judgments from simple to complex, e. g. this and not this, inequality, equality, number as definite multitude, etc., and the prospective teacher must discover this gradation.

The general truth common to all the facts of arithmetic is the idea quantitative relation involved in every measurement, and it is in the light of this truth that these facts must be identified.

Upon examining the subject matter of arithmetic in the light of this general truth, it is discovered that but few general principles are involved, and that these are involved in many phases sometimes being difficult to recognize:—It is seen, for example: that the principles of division are

involved in cancellation, in reduction, multiplication, and division of fractions, and in proportion; that the problems involved in topics such as lumber measure and applications of percentage are identical with the three general problems in number growing out of the fact of there being three elements in every measurement; that illustrative examples must be carefully selected and graded; and that since all topics involve the same general problems, great care should be taken to prevent using examples to illustrate fractions which belong under some more complex application of number.

The idea equality is a fundamental idea underlying all mathematics, and all solutions depend upon the axioms relating to equals; hence the importance of the teacher's appreciation of these axioms.

In the work in arithmetic the above ideas are induced through the study of number as to its origin, its development, its expression, and its applications, and the pupils are thus led to see the facts of arithmetic in their relation.

Method in Arithmetic.

"Having seen in arithmetic, products of sense-perception, memory, imagination, the understanding and the reason; having seen in psychology, the laws and conditions of sense-perception, memory, imagination, the understanding and the reason; and having seen in the science of education, the adaptation of phases of subject matter to corresponding stages of mental growth and the art and devices which may be employed to stimulate the mind of the learner to appropriate the phase of a subject which it is capable of grasping at a given stage of development," the student now studies "the order in which the phases of arithmetic unfold to the intelligence of the learner and also the means to be employed to stimulate him to take the successive steps involved in a mastery of

the subject," which study constitutes method and devices in arithmetic.*

In the study of method and devices in arithmetic the following principles are discussed:

Number is quantitative relation, and all work in number necessitates the forming of quantitative judgments.

There is is a graduation of quantitative judgments from simple to complex, and the mind must apperceive the simple in order to be able to apperceive the complex.

The judgments, to induce the mind to see each, should be concreted in magnitudes whose relative size may be determined easily.

The first conception of number is that it is the thing numbered, and the mind grows into the habit of seeing number as relation through many experiences of quantifying.

In the early stages of number work there should be constant calls for perception, judging, and verifying; and the work of the learner must be free work. No ready-made judgments should be given him.

The judgment should be made concerning; first, magnitudes present; second, magnitudes absent; third, numbers; and the mind should thus be led to abstract number and see it as relation.

All elements of a comparison should be presented to the mind for consideration.

The material used in illustrating number truths should be simple, free from diverting relations, and such that the number idea of it engages the attention.

In number, as in reading, the mind should appropriate an idea and then learn the symbol for it, first the oral symbol then the written; and great care is required

* For fuller discussion of the above see "Correlation of Professional Work" in the statement of the "Theory of the School."

lest the child fall to memorizing the names of number sums, differences, products and quotients.

The facts of addition, subtraction, multiplication, and division found in the tables must become as familiar to to the child as do the letters of the alphabet.

Since integers and fractions are one in kind, differing only in degree, the former arising through the synthesis of units and the latter through their analysis, they should be so presented as to show their identity.

All spplications of number involve the same general problems. The "cases" of percentage are not peculiar to percentage. In every application of number, "cases," i e, general problems, are found.

There is a mode of presentations for the applications of number;—measurements of areas, volume and capacity, wood measure, interest, commission, etc.,—which leads the pupils to see the unity of these topics through seeing the general problems involved in all.

To be qualified to teach any application of number to pupils, the teacher must know it in actual business, must have run "the fingers of his mind around its edges" in everyday life.

The elements involved in an application of number should be so presented that the pupil may see their business relations and can properly relate them.

The demands upon the pupil should be such as to make of him an investigator and not a reproducer. He should be able to determine possible relations of elements after he sees the elements.

Algebra.

Algebra differs from arithmetic in that it deals with number as expressed in general symbols. Here, as in arithmetic, we find two lines of work, viz: statements made and operations performed.

To most students the language and terms of algebra are indeed strange. The work begins with statements, in equations, of simple problems and the solution of these to introduce the meaning of teams.

No rules are given for work but rather the pupil is led to see the meaning of the expression, say $x-[2x-4x]$, and then to determine what must be done to simplify it. He is led to see that only four operations can be preformed upon equals without destroying their equality and to see that it is only by performing some or all of these that an equation can be solved.

In algebra, as in arithmetic, much oral work is done, especially in solving equations for practice. The aim here and the method are largely as in arithmetic.

The work done covers the matter presented in texts for high schools.

Geometry.

The Geometrician uses axioms and definitions as his earliest major premises and deduces truths. Then uses these truths also as major premises deducing yet other truths, and thus builds a science of quantity in extension.

Every truth is established by means of deductive reasoning and the language of geometry is that of logic in clearness. Hence the student is carefully led to see the sequence of geometric truths, to use the syllogism, and to distinguish between exact statements and those nearly exact.

Much of the classroom work consists of the development of series of propositions. For example, a figue is represented on the board and truths are stated or written by class. Then some auxiliary construction is added and any additional truth is given with the proof of its truthfulness. By this means a series of several propositions is sometimes deduced and the true meaning of the corollary is seen.

Besides, the student learns his own power and becomes independent of the text and freed from its language.

English Department.

THOMAS HOWARD GROSVENOR.

GRAMMAR.

Every study or science contains a fundamental idea which determines what facts belong to its subject-matter and what do not, and also the relation of each fact to the subject-matter as a whole and to every other fact in it. The fundamental idea in the science of grammar is this: the sentence, an instrument the only use of which is to express a thought. Grammar, therefore, deals with the sentence as determined by the thought. By this idea all the different facts of the study are organized into a science. The aim of the work is to lead the student to gain a scientific knowledge of the subject.

The work falls into four main divisions.

In the first division the fundamental unity of all sentences is discovered by working with sentences of various meanings and forms. Their universal attributes are determined. The student sees that the only use of the sentence is to express a thought; that every fact of the sentence must be viewed in the light of this use, and referred to it for its explanation; that a sentence has three essential parts, a subject, a predicate and a copula, because the thought that it expresses has three essential elements.

In the second division the work is still with the sentence as a whole. Sentences are divided into subclasses on the bases (1) of their purpose or meaning, and (2) of their form or number and rank of thoughts expressed. On the first basis sentences are declarative, interrogative,

explanatory and imperative. On the second they are simple, complex and compound.

In the third division of the work the sentence is studied as to its organic parts. The parts of speech are defined and classified as are modifiers. Simple, complex and compound sentences respectively are studied as to (1) the words used in forming them, (2) the uses of these words, an (3) their modifiers.

In the fourth division the parts of speech are dealt with in detail. The work on the noun will serve as an example of what is done with each. First the noun is divided into its classes—proper, common, class, collective, concrete, abstract, etc. Then its properties, gender, person, number, and case are worked out.

The method of work may be called the laboratory method. The student examines the sentence and is led to make his own definitions, classifications, etc. There is both analysis and synthesis. The facts of the subject are studied in their relation to one another and to the sentence as a whole.

The library contains a fine selection of standard texts which are constantly used as reference books.

Reading.

(One Term.)

Reading is the language study the purpose of which is to give a mastery of the printed page as the expression of thought. There are two kinds of reading. They are silent reading and oral reading. The first has for its end the interpretation of the printed page; the second, the adequate expression of the thought, to others, in the words of the author. Obviously good silent reading is the condition of good oral reading.

Aside from the main purpose, reading serves other ends. Through the study of good literature, a taste for

it is formed; the aesthetic nature is cultivated; and through the contemplation of noble characters the reader is stimulated to be like them.

The work in the silent phase of the subject is planned to give the student a better knowledge of the printed page as a symbol of thought, to show him how to overcome its difficulties, and to prepare him to read well orally. To read well orally one must read understandingly. All other reading is mouth reading simply.

The elementary principles of literary classification and analysis are worked out as far as possible inductively from masterpieces of discourse. All discourse is manifestation of mind. It is an appeal to mind. Because of the threefold natnre of mind there are three kinds of discourse. These are didactic, emotional, and ethical, discourse. Because the ideas treated in discourse are particular and general, there are different forms of discourse; description and narration setting forth particular ideas, and exposition and argumentation, general ideas. These forms of discourse are carefutly analyzed. Since a great deal of discourse is figurative, the figures of speech are defined and classified.

The aim of the work in oral reading is to remove difficulties which prevent correct oral expression of the thought of the printed page. The topics treated are: the sources of good expression; the elements of good expression, articulation, syllabication, and accent; pronounciation, its standards; consonant and vowel sounds, their classification and analysis; diacritical marks; etc. A part of each day's recitation is the oral reading of selections assigned for classification and analysis.

Rhetoric and Composition.

(Three Terms.

The problem of rhetoric and composition is how to

adapt discourse in harmony with its subject and occasion to the requirements of the reader and hearer. There are two main divisions in the subject. These are style and invention. Style deals with the manner of expressing thought. It comprises the construction of sentences and paragraphs and their combination to form discourse, and has to do with the mechanical features of the subject. Invention is creative. It consists in the working out of a line of thought through an outline to its final form. It implies the finding, the selecting, and the grouping of material.

The work in style comprises the study of the following topics: choice of words; phraseology; qualities of style, force, rapidity, life (figures of speech); smoothness, the sentence; punctuation; the paragraph, etc.

The work in invention consists of the analysis of masterpieces of each of the four forms of discourse: description, narration, exposition, and argumentation to determine their underlying principle and particular attributes, and the writing of original examples of each of these forms.

A great deal of written work is required. This is carefully criticised and returned to the student. The material for the compositions is drawn almost entirely from the experience of the student. The work is therefore original.

English Literature.

(Three Terms.)

The work in this subject is planned to give the student, as far as possible in the time allowed, an introduction to the great names in English Literature, and to guide him in the development of his literary taste.

The work is concentrated upon the authors themselves, and there is no attempt to give a historical survey

as such. But each author is studied in the light of the time in which he lived and his influence upon his time. A birds-eye-view of the whole field is thus given. Among the authors studied are: Chaucer, Spenser, Shakespeare, Milton, Swift, Addison, Gray, Goldsmith, Keats, Scott, Tennyson and Browning.

The class work consists of readings from the works, oral and written discussions, special reports and papers.

The library contains a fine selection of reference books, and nearly all the great authors are represented by selections from their works.

Method in English.

(Six Weeks.)

This work comprises method in reading, language, and grammar. The central idea in each subject is worked out first, and then, by means of it, the subject matter, its divisions, their relative importance, and the order of their presentation are determined.

Catalogue of Students.

FIRST GRADUATING CLASS, '95—15.

Boyum, E. E.	Jennings,	La
Brumwell, Milton	Hatton,	N. D.
Butler, W. H.	Sherbrooke,	"
Courtney, W. J.	Page,	"
Dallas, David	Sherbrooke,	"
Frazier, L. J.	University,	"
Morrish, W. J.	Page,	"
Putnam, Grace B.	New Rockford,	"
Allen, (Saunders), Ida B.	Dickinson,	"
Sinclair, J. H.	Cooperstown,	"
Smith, R. L.	Grand Forks,	"
Sonderall, J. B.	Velva,	"
Springen, Sophia H.	Mayville,	"

Warren, E. G.	Brisbane,	N. D.
Williams, Louis	Mayville,	"

SECOND GRADUATING CLASS, '96—13.

Boyum, George	Jennings,	La.
Brown, W. G.		
Belanger, Kittie	University,	N. D.
Kaldor, Theodore	University,	Minn.
Koppang, Sophia	Portland,	N. D.
Anderson, (Larson), Louise	Mayville,	"
Moen, Ida	Mayville,	"
Mooers, W. G.	Devils Lake,	"
McDonald, N. C.	Langdon,	"
Patterson, Henry	Hoople,	"
Sunderland, T. S.	Grafton,	"
Thams, Fredricka	Fargo,	"
Wambheim, Mary	Hatton,	"

THIRD GRADUATING CLASS, '97—7.

Carlile, A. M.	Blanchard,	N. D.
Hasselquist, Thomas A.	Sherbrooke,	"
Keene, (Josh), Minnie S.	Hope,	"
Keene, Edward O.	Hope,	"
Sinclair, Edith R.	Minneapolis,	Minn.
Thornton, Edgar	Manila,	Philippine, I's.
Mooers,(Walton), Libbie C.	Devils Lake,	N. D.

FOURTH GRADUATING CLASS, '98—3.

Fecher, Gilbert O.	Hatton,	N. D.
Lucken, Emma F.	Mayville,	"
Walbom, Anna A.	Mayville,	"

FIFTH GRADUATING CLASS, '99—13.

Anderson, Sophia	Fargo,	N. D.
Blackorby, Charles E.	Cando,	"
Bolstad, Andrew L.	Mayville,	"
Carhart, Edith Beebe	Devils Lake	"
Colvin, Robert	Portland,	"
Hillier, Geo. H.	Northwood,	"
Halland, Hannah Alice	Fargo,	"

Johnson, Kittie May	Iowa City,	Ia.
Curry, (Long), Adelaide S.	Finley,	N. D.
Moskau, Gilbert	Mayville,	N. D.
Porter, W. H.	Chicago,	Ill.
Rosholt, Ruth	University,	Minn.
Sletto, Anna	Hatton,	N. D.

SIXTH GRADUATING CLASS, '00.—20.

Burdick, Usher L.	Minnewaukan,	N. D.
Berrington, Blanche Frances	Northwood,	"
Cooper, Margaret	Northwood,	"
Cruden, Nellie	Dickinson,	"
Cassidy, James H.	Leeds,	"
Deitz, Helen M.	Michigan City,	"
Hibbard, Mabel E.	Mayville,	"
Keene, Rena E.	Hope,	"
McCarten, Margaret	Larimore,	"
McCarten, Tene	Hope,	"
McCarten, Cinda	Cando.	"
Morrish, Ada Maud	Page,	"
Miller, Albert G.	Oberon,	"
Nestos, R. A.	University,	Wis.
Robertson, Emma	Park River,	N. D.
Sinclair, Sadie J.	Minneapolis,	Minn.
Skrivseth, Bendick O.	Russia.	"
Watkins, Augusta A.	Grand Forks,	N. D.
Wilkins, Coral	Fargo,	"
Wold, Inga	Valley City,	"

FOURTH YEAR.—17.

Adams, Eva M.	Fergus Falls,	Minn.
Anderson, Annie Frances	Mayville,	N. D.
Dolve, Nels O.	Portland,	"
Deitz, Effie	Kempton,	"
Erickson, Mathias B.	Hillsboro,	"
Halldorson, Halldor	Rugby,	"
Hendrickson, Tillie	Grafton,	"
Hillier, Will A.	Hoople,	"

Jones, Charlotte	St. Thomas,	"
Kaldor, Ole O.	Mayville,	"
King, Sylvia L.	Hope,	"
Lynn, Blanche Gurr	Grand Harbor,	"
Morrill, Jesse	Wonewoc,	Wis.
McCarten, Emmett	Mayville,	N. D.
Vinje, Eivin	Dalton,	Minn.
Voge, Ole	Dundee,	N. D.
Willis, Bessie	Fessenden,	"

THIRD YEAR.—15.

Carhart, Margaret	Mayville,	N.D.
Clunis, Viola	Weible,	"
Denoyer, John	Graham's Island,	"
Erickson, Edward	Dundee,	"
Hocking, William	Absaraka,	,,
Kuhn, Elizabeth	Pana,	Ill.
Koppang, Olga	Portland,	N. D.
Morrish, Carrie M.	Mayville,	"
Parsons, W. Earl	Page,	"
Poulsson, Eleanor E.	Mayville,	"
Peterson, Eli A.	Towner,	"
Skarperud, Andrine L.	Mayville,	"
Sando, Anna	Portland,	"
Shear, Maud B.	Buxton,	"
Tufte, Erick	Northwood,	"

SECOND YEAR—26.

Arnegard, Anneta	Hillsboro,	N. D.
Arnegard, Andrew	Hillsboro,	"
Arnegard, Oscar	Hillsboro,	"
Burke, Clyde	Blanchard,	"
Cecka, Joe B.	Cummings,	"
Chase, Mary	Reynolds,	"
Chase, Ira	Reynolds,	"
Cooper, Annie	Mayville,	"
Erickson, Clara	Mayville,	"
Erickson, Oscar	Dundee,	"

Forre, Anna E.	Mayville,	N. D.
Green, Pearle E.	Page,	"
Halverson, Ida B.	Mayville,	"
Johnson, Oscar	Hatton,	"
Koerner, Lottie	Portland,	"
Kaase, Theodore	Northwood,	"
Letherman, Edith	Mayville,	"
Lerom, Hattie	Buxton,	"
Lynner, Hilda	Mayville,	"
Monilaws, Frances	Absaraka,	"
McMordie, Margaret	Mayville,	"
Mooney, Annie	Reston,	Manitoba,
Raaen, Aagot	Hatton,	N. D.
Springen, Hans G.	Mayville,	"
Sorenson, Mamie	Buxton,	"
Wilbur, Ruth	Cummings,	"

FIRST YEAR.—88.

Anderson, John G.	Portland,	N. D.
Anderson, Alma	Portland,	"
Bridston, Martha	Thompson,	"
Bonnell, Kittie	Blanchard,	"
Botten, George	Dwight,	"
Bye, Helen	Hatton,	"
Bishop, Mae	Lindsey,	Wis.
Brooks, Mae	Devil's Lake,	N. D.
Bjelde, Amy	Mayville,	"
Black, Annie	Northwood,	"
Bassett, Mabel F.	Mayville,	"
Bathgate, Margaret E.	Park River,	"
Collins, Loretta Rose	Grand Haven,	Wis.
Chilsted, Hannah	Portland,	N. D.
Cooper, Clara E.	Mayville,	"
Cowden, Marie V.	Mayville,	"
Ellingrud, Christine	Hillsboro,	"
Ford, Edward H.	Absaraka,	"
Forre, Chester	Mayville,	"

Grimstvedt, Anna S.	Blanchard,	N. D.
Grettum, Jessie	Mayville,	"
Hanson, Ella	Mayville,	"
Hillstad, Mary	Mayville,	"
Holter, Alfred	Hatton,	"
Holbrook, Birdie	Rugby,	"
Hanson, Anna	Mayville,	"
Hougen, Annetta	Northwood,	"
Halland, John G.	Grafton,	"
Johnson, J. B.	Hillsboro,	"
Jacobsen, Amanda	Grand Harbor,	"
Johnson, Helga	Winona,	Minn.
Jemtrud, Caroline	Portland,	N. D.
Johnson, Ella	Belmont,	"
Keyes, David W.	Absaraka,	"
Kelley, Bernice B.	Crary,	"
Kjelsbeag, Christina	Mayville,	"
Kain, Dorothy	Devil's Lake	"
Kenny, Florence	Conway,	"
Lee, Gilbert O.	Park River,	"
Langlie, Mercedes H.	Cooperstown,	"
Lucke, Esther L.	McCanna,	"
Lucken, Lillie M.	Mayville,	"
Monson, Martin	Hatton,	"
Molden, Gustave	Mayville,	"
Molden, Gena	Mayville,	"
McIntyre, Anna	Mayville,	"
Morrish, Minnie Violet	Mayville,	"
Melhus, Nettie	Blanchard,	"
Mitchell, Jessie	Crystal,	"
McCarten, Edward	Mayville,	"
Newman, Ida M.	Portland,	"
Nehlson, Lillian	Pepin,	Wis.
Orpe, Millie	Soper,	N. D.
Ohlquist, Mamie	Mayville,	"
Osmon, Thora	Portland,	"
Olson Ragnhild	Portland	"

Olson, Dagny	Portland	N. D.
Olson, Inga A.	Mayville,	"
Olson, Henry	Portland,	"
Pladsen, Caroline	Hatton,	"
Price, Elizebeth A.	Pingree,	"
Peterson, Gertrude	Buffalo,	"
Pinkham, Katherine	Eugene,	Oregon.
Peterson, Ella M.	York,	N. D.
Pottle, Earle K.	Portland,	"
Richard, Millie	Absaraka,	"
Rinde, Ambrosia	Dundee	"
Reese, Gustave	Dundee,	"
Swain, Nina A.	Northwood,	"
Swihart, Bertha	Mayville,	"
Skarperud, Mary	Mayville	"
Swain, Mabel	Northwood	"
Simle, Melvin	Portland	"
Sondreaal, Gertie	Hatton	"
Sparrow, Margaret	Primrose	"
Stevens, Jessie M.	Crary	"
Tweeten, Mabella T.	Berwick	"
Thorstad, Inga	Mayville	"
Tennison, Mabel G.	Cummings	"
Webster, Clifton E.	Arthur	"
Webster, Lista	Amenia	"
Warren, Sylvia A.	Mayville	"
Webster, Tedd D.	Amemia	"
Weltzin, Anna M.	Mayville	"
Warren, Kittie L.	Mayville	"
Warren, Lottie	Mayville	"
Wanless, Iva	Devils Lake	"
Wambheim, Matilda	Park River	"

SUMMER SCHOOL.

Anderson, Julia	Hatton	N. D.
Anderson, Frances	Mayville	"
Adams, Eva M.	Grandin	"

Butterfield, Winroy E.	Caledonia	N. D.
Burke, Mabel	Blanchard	"
Bolstad, Bertha	Cummings	"
Butterfield, Effie	Caledonia	"
Bolstad, A. L.	Mayville	"
Berrington, Agnes	Mayville	"
Brown, Charles C.	Mayville	"
Boulger, Katharine	Mayville	"
Bowen, Minnie	Hope	"
Bowen, Zoe	Hope	"
Berrington, Blanche F.	Mayville	"
Brenneman, May	Caledonia	"
Cockran, W. M.	Hendrum	Minn.
Cooper, Margaret	Mayville	N. D.
Chantland, Ellen J.	Mayville	"
Colvin, Robt.	Portland	"
Carhart, Emily L.	Mayville	"
Clunis Viola	Weible	"
Cunningham, Mrs. Kate E.	Galesburg	"
Carpenter, Harry	Hope	"
Christanson, Helen	Buxton	"
Dayhuff, Millie	Hope	"
Dunlava, Nellie T.	Arthtur	"
Erstad, Ildred E.	Hatton	"
Erstad, Inger	Hatton	"
Erickson, Clara	Mayville	"
Forre, Anna	Mayville	"
Giles, Gertrude	Caledonia	"
Hibbard, Mabel	Blanchard	"
Henninger, Carl G.	Sherbrooke	"
Henninger, W. S.	Sherbrooke	"
Hepburn, Margaret	Blanchard	"
Hoose, May E.	Caledonia	"
Harman, Kate G.	Finley	"
Hillerson, Minnie	Hope	"
Hill, Minnie	Hillsboro	"
Hillstad, Mary	Mayville	"

Hynes Rosella G.	Mayville	"
Hynes, Stacia C.	Iron River	Wis.
Herte, Bertha	Portland	N. D.
Johnson, Carl J.	Finley	"
Johnson, Rosa	Caledonia	"
Kuhn, Rose W.	Pana	Ill.
Koppang, Sophia	Portland	N. D.
Koppang, Christina	Portland	"
Lyons, Alice M.	Hope	"
Layman, Blanche	Caledonia	"
Lunde, August	Buxton	"
Lynner, Hilda	Mayville	"
Lyche, Charles A.	Hatton	"
Letherman, George M.	Mayville	"
Letherman, Edith E.	Mayville	"
Larson, Ellen M	Portland	"
Larin, Albena	Mayville	"
McPherson, James M.	Page	"
Miller, Wilbur G.	Sherbrooke	"
Moline, Mary J.	Mayville	"
Moe, Eliza	Hillsboro	"
Morrish, Carrie M.	Mayville	"
McCarten, Edward	Mayville	"
Morrish, Ada Maud	Mayville	"
McCarten, Elsie	Hope	"
McCarten, Emmett	Mayville	"
McCarten, Margaret	Mayville	"
McInnes, Olive	Kelso	"
Nottage, Alice M.	Reynolds	"
Olson, Inga	Mayville	"
O'Brien, Amelia	Blanchard	"
Pladsen, Caroline	Hatton	"
Petro, Estella M.	Reynolds	"
Quamme, Amelia	Hillsboro	"
Rounds, G. H.	Hillsboro	"
Rugland, Clara G.	Portland	"
Rover, Helen	Halstad	Minn.

Rendedal, Julia	Mayville	N. D.
Sando, Olga M.	Portland	"
Sparling, Emily	Clifford	"
Sweetland, Tracy O.	Mayville	"
Sinclair, Sarah Jean	Hannaford	"
Thompson, Tina	Caledonia	"
Wilson, Charles	Caledonia	"
Watkins, Augusta A.	Mayville	"
Warley, Joseph	Portland	"
Williams, Kate	Blanchard	"
Welsh, Mrs.	Blanchard	"

SUMMARY OF ATTENDANCE.

Fourth Year Class	17
Third Year Class	15
Second Year Class	26
First Year Class	88
Summer School	88
Total	234
Counted Twice	13
Net Total	221

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